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NORTHERN TIER PIPELINE: MONTANA  
PUBLIC ATTITUDE ASSESSMENT PROGRAM  
DRAFT FINAL REPORT

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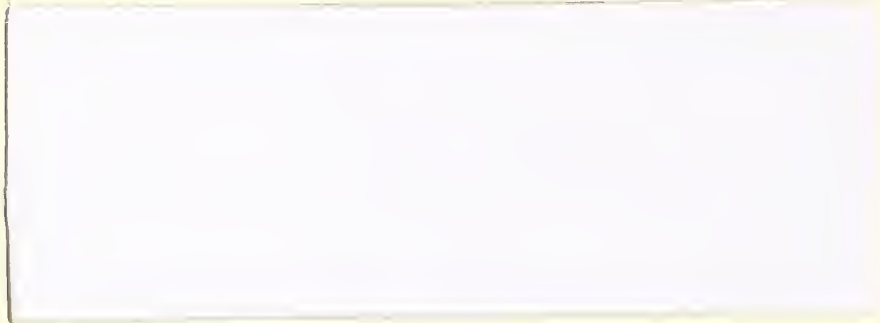


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NORTHERN TIER PIPELINE: MONTANA

PUBLIC ATTITUDE ASSESSMENT PROGRAM  
DRAFT FINAL REPORT

prepared for

Montana Department of Natural  
Resources and Conservation

prepared by

Mountain West Research, Inc.  
Billings, Montana

May 1979





MOUNTAIN WEST  
RESEARCH INCORPORATED

June 1, 1979

Mr. Larry Nordell  
Energy Division  
Montana Department of Natural  
Resources & Conservation  
32 S. Ewing Street  
Helena, Montana 59601

Dear Larry:

Please find enclosed five (5) copies of the revised Final Report for the Public Attitude Assessment Program carried out as part of Contract No. ED-MWRI-088 between DNRC and Mountain West Research, Inc. for performance of the socioeconomic resource study for the proposed Northern Tier Pipeline. All five copies include the text and Appendix A. Due to the volume and highly specific nature of Appendices B-E, they are attached to only one copy of the report. Our feeling was that most readers of the report would not be interested in these details and that their bulk would discourage use of the document as a whole. Also enclosed is a data tape, according to your specifications, that combines the county and community surveys. Appendix B will serve as a guide for any further manipulations of that data.

I trust that the report will meet with your approval.

Sincerely,

MOUNTAIN WEST RESEARCH, INC.

Dwayne H. Jelinek  
President

DHJ/jz

enc

cc: Dave Janis





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## 1. INTRODUCTION

This report describes the results of a survey of 517 Montanans regarding their attitudes toward the proposed Northern Tier Pipeline Project. As such, it represents the final element of the Public Attitude Assessment Program commissioned by the Montana Department of Natural Resources and Conservation (DNRC) as one aspect of their effort to obtain public input on the proposed project. As is often the case with surveys carried out in a compressed time period with a limited budget, this survey's final report does not fully exploit the information collected through the attitude survey questionnaires. However, persons interested in further analyzing the results should contact the Energy Division of DNRC where the response frequencies, cross tabulations, completed questionnaires and computer tape of coded responses are on file.

### 1.1 Background

Consistent with the provisions of the Montana Environmental Protection Act (MEPA), the State Department of Natural Resources and Conservation, Energy Division, has been assigned the responsibility of preparing an environmental impact assessment of the proposed Northern Tier Pipeline Project, a facility designed to transport crude oil over 1500 miles from Port Angeles, Washington, to Clearbrook, Minnesota, traversing over 600 miles of the State of Montana in the process. In fulfilling their obligations under MEPA, DNRC officials decided that an assessment of public attitudes toward the proposed project as well as toward the key socioeconomic impact issues potentially engendered by it would be highly desirable. Consequently, the Department contracted with Mountain West Research, Inc., of Billings to design and execute a "Public Attitude Assessment Program" to be carried out within a three-month period.

### 1.2 Objectives of the Program

The Public Attitude Assessment Program objectives as established in the scope of work are:

- 1) To provide a sample of opinion leaders and local decision-makers in each of the counties traversed by alternative corridors of the proposed Northern Tier Pipeline with the opportunity to express their concerns and opinions regarding the project;



- 2) To identify in more depth the issues and concerns regarding potential pipeline impacts of citizens in those counties and communities likely to be significantly affected by the project; and
- 3) To relate those locally-expressed issues and concerns to appropriate components of the impact assessment process and to apply them, where possible, to the design of mitigation measures.

There was also a fourth objective related to the preparation of a Final Report in which, where possible, relevant implications of the program's results for the corridor selection process would be identified.

Achieving the objectives of the Public Attitude Assessment Program implied conducting two distinct surveys. The first would interview key respondents in each of the counties directly affected by one or more of the proposed pipeline corridors. The second would involve more in-depth interviews with key respondents and ordinary citizens at the community level in those counties where the risk of significant impact was judged to be high.

### 1.3 Contents of the Report

Chapter 2 of this report details the methods employed in the design, execution and analysis phases of the survey. It deals successively with the selection of impacted counties and communities, the development of the survey instruments (questionnaires), sampling and field procedures, and data processing methods.

Chapter 3 discusses the primary survey results. Salient characteristics of respondents are first presented in terms of type and geographic distribution, demographic characteristics, and other independent variables that are judged to be more causes than indicators of opinions and attitudes. Next, the general distribution of attitudes and opinions among respondents is presented and interpreted in terms of the following categories:

- 1) General expectations,
- 2) Lodging,
- 3) Community facilities and services,
- 4) Employment,



- 5) Land use, and
- 6) Fiscal expectations.

Finally, overall attitude themes are identified.

Chapter 4 identifies the implications of survey results for the environmental assessment process and for possible impact mitigation measures.

Finally, five appendices, are included presenting sample questionnaires, data processing documents, printouts, supporting tables, and other relevant materials of potential utility to the reader. It should be noted that, at the time the PAAP surveys were being conducted, the corridor alternative along Interstate 90-94 was still under active consideration by DNRC. This report therefore includes the Interstate corridor among the pipeline route alternatives.



## 2. SURVEY METHODOLOGY

### 2.1 Overview

Given the objectives of the Public Attitude Assessment Program (PAAP), it was evident that two levels of inquiry would have to be pursued:

- 1) A general survey of the opinions and attitudes of key respondents at the county level, focused on potential impact issues relevant at that scale, and
- 2) A more detailed survey of opinions and attitudes toward the project and its potential impacts on a given community.

A standardized questionnaire was developed as the research instrument for each level. To permit an aggregate analysis of county and community responses to non-site-specific questions, a number of questions are identical in both the county and community questionnaires. In order to facilitate the broadest and most realistic range of response possible, the majority of the substantive questions were left open-ended. The resultant responses often ranged broadly, creating some difficulties for data processing later on.

The open-ended nature of the attitude assessment questions argued for the use of personally administered survey instruments, as opposed to those administered by telephone or mail. The questionnaires were, therefore, designed in a personal interview format. Combining the personal interview method with budgetary considerations led to ceilings being established on the number of potentially impacted counties and communities in which the survey would be carried out, as well as on the number of interviews per county/community. These ceilings corresponded to approximately 400 community level and 200 county level interviews. In the actual survey, 298 community and 219 county interviews were completed. Fewer community level interviews were completed due to the fact that the number of counties in which significant impact was a risk was less than originally anticipated; hence, the potential number of impacted communities was also correspondingly less.

The design and pretesting of research procedures and the questionnaires were carried out during December 1978. Actual interviewing was conducted throughout the state over the period January 2 - February 7, 1979, by two field



teams: one in the eastern half of the state and one in the western half. Data processing, including coding, cleaning, and tabulating the questionnaire responses, was completed by mid-February, with analysis and write-up extending into March.

The limited schedule and budget for the survey precluded drawing a probability sample because: (1) an adequate sampling frame was not available and could not be developed in time; and, (2) the compressed schedule for the field work would have prevented the number of call-backs necessary for securing an adequate response rate to a probability sample. These constraints forced the adoption of a judgmental sampling strategy, designed to secure a maximum number of key respondents in minimum time. The judgmental strategy broadly approximated a probability sample of leadership positions with unlimited replacement of non-contacts.<sup>1</sup> In addition, schedule constraints precluded full exploitation of the rich data collected through the questionnaires and forced the analysis to focus on survey results most directly relevant to the socio-economic impact assessment process.

## 2.2 Selection of Counties and Communities

### 2.2.1 County Level

The county level interviews were to be conducted in all counties directly affected by one or more of the alternative pipeline corridors. These were defined as counties through which a corridor passed and/or in which significant socioeconomic impact from the proposed project was a possibility. There were 38 such counties, or approximately 68 percent of Montana's total. Figure 2-1 shows the location of these counties and the relevant pipeline corridor alternatives.

### 2.2.2 Community Level

#### General

The basic issue dealt with how to select no more than 20 counties and 50 communities from among the larger group directly affected by Northern Tier Pipeline corridor alternatives. Since the focus was on those counties and communities in which significant impact might occur, the first

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<sup>1</sup>This is a key point, as it means that the 517 persons interviewed cannot necessarily be considered representative of all Montanans.



### Counties in Which County and Community Surveys Were Carried Out





question was what impacts might be anticipated and what information is readily available on county/community characteristics that most influence the type and level of those impacts.

The nature and level of impact depend basically on the magnitude of the nonlocal population generated by the project and temporarily resident in an area as well as the capacity of the area to accommodate that nonlocal population. Population size, public and commercial services endowment, and location with respect to the construction site(s) are the factors which most influence potential socioeconomic impacts. For example, communities with smaller populations, with limited services, distant from large urban areas, and in close proximity to the work site(s) run a higher risk of experiencing impact from a temporarily resident nonlocal population.

The only information available for all of the potentially affected counties and communities consisted of population and location relative to pipeline corridor alternatives. Accordingly, the selection method adopted employed county and community population as the first criterion.

Categories were established based on population ranges. Each county was reviewed and categorized accordingly. The population data, particularly at the community level, was based on 1970 Census reports and Montana Department of Community Affairs projections. Therefore, the inherent precision of the population criterion limits somewhat the accuracy of the categorization process. Proximity to proposed pipeline corridors was a further criterion incorporated into selection procedures. Finally, past experience and knowledge of particular local conditions was brought to bear in the selection process to evaluate the reasonableness of the selection decisions. That is to say, a certain amount of personal judgment was exercised.

Application of the selection methodology resulted in the identification of 19 counties, but more than 50 communities. Therefore, it was ultimately necessary to select a sample of communities from among all of those in which significant impact would be a possibility. The procedure used is detailed in the paragraphs that follow. It essentially involved the selection of two towns per county, in most instances, representing a range of population.



Some counties have only one community, so no others could be selected, such as Garfield (Jordan), Petroleum (Winnett), Sweet Grass (Big Timber), and Treasure (Hysham). The total communities finally selected number 33.

#### Detailed methodology

This section outlines in detail the county/community selection process for the in-depth public attitude survey. The selection methods were systematic. Each county and community was reviewed based on the following criteria:

##### A. County Selection

1. Location - Only counties on or within 25 miles of the proposed corridors were reviewed. There were 47 such counties. Of the 47 counties, 39 are crossed by one or more of the proposed pipeline corridors while 8 are within 25 miles of a corridor. The group of 39 was selected for further review. The 8 counties that were not crossed by a proposed corridor, but were located within 25 miles of one, were examined separately; and it was determined that significant impact would probably not occur in any of them.
2. Population of county and largest city - County and city population limits were established based on empirical evidence that population size of county and community are indicators of the extent to which impacts might be accommodated.

The counties were classified according to the following categories:

- a) Population exceeding 20,000 with no city population greater than 10,000.
  - b) Population exceeding 20,000 including a city of more than 10,000.
  - c) Population between 10,000 and 20,000 with city population greater than 10,000.
  - d) Population between 5,000 and 20,000 with no city population greater than 10,000.
  - e) County population less than 5,000.<sup>1</sup>
3. Proximity to city of 10,000 or more, in an adjacent county - This was determined by estimating the commuting distance from the construction site in a rural county to the closest town with a population exceeding 10,000. Commuting distance in this instance was a maximum of 60 miles. All counties

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<sup>1</sup>Source of county population - Bureau of Business & Economic Research, School of Business Administration, University of Montana.

Source of town population - U. S. Bureau of Census, 1970 and Montana Dept. of Community Affairs, Division of Research, Montana Population Projections: 1975-2000, (1977).



with the exception of those in category 2.b<sup>1</sup> were classified as follows:

- a) Near a city with a population exceeding 10,000.
- b) Not near a city with a population exceeding 10,000.

Appendix A summarizes applicability of the selection criteria to the counties evaluated. The categories by which the counties were classified were then ranked according to the degree of potential impact anticipated. The greatest impact potential is expected in counties with small total populations, and including small towns located more than 60 miles from an urban center of more than 10,000. Construction workers would have to reside somewhere in these areas. A few exceptions existed and adjustments were made accordingly.

In the initial cut, using as criteria county population less than 5,000 and distance greater than 60 miles from a large urban area in adjacent county, 13 counties were chosen.

Applying a second criteria, populations between 5,000 and 20,000 with no community over 10,000 and greater than 60 miles from a large urban area in adjacent county, added eight additional counties. This brought the total to 21 counties. A second review was done. Each county was examined using the map with proposed corridors indicated. It was discerned that two counties, Roosevelt and Golden Valley, would not be significantly impacted because of the location of the proposed corridors through the counties. The final count for counties where there is a potential impact risk is 19.

## B. Community Selection

Communities located in the 19 selected counties were chosen on the basis of population size and proximity to a proposed corridor. Pipeline workers would most likely be drawn to locations where their housing, services, and leisure time requirements could be satisfied. Therefore, the largest community (less than 10,000 population) within commuting distance to the proposed corridor was chosen. In most cases, the largest community is located right on a proposed corridor. Where possible, a second community within the county was chosen, also based on its nearness to a corridor alternative. A total of 33 communities was selected.

Table 2-1 lists the counties and communities selected for the in-depth survey. The communities are also highlighted in Figure 2-1.

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<sup>1</sup>Counties with a town(s) exceeding a population of 10,000 were excluded because it was assumed that workers would primarily reside in the nearest large town and, in the case of 2.b, the town would be within the county.



TABLE 2-1

Counties and Communities Having Significant  
Impact Risk from the Proposed Pipeline

	County	Community	Corridor
1.	Custer	Miles City*	Interstate
2.	Daniels	Scobey*	Hi-Line
		Flaxville	Hi-Line
3.	Dawson	Glendive*	Interstate
		Richey	Interstate
4.	Fergus	Lewistown*	Lewistown Cutoff
		Denton	Lewistown Cutoff
5.	Garfield	Jordan*	Preferred
6.	McCone	Circle*	Preferred
		Vida	Preferred
7.	Meagher	White Sulphur Springs*	Preferred
		Martinsdale	Preferred
8.	Musselshell	Roundup*	Preferred
9.	Park	Livingston*	Interstate
		Clyde Park	Interstate
10.	Petroleum	Winnett	Interstate
11.	Phillips	Malta*	Hi-Line
		Saco	Hi-Line
12.	Powell	Deer Lodge*	Preferred, Interstate
		Ovando	Preferred, Hi-Line
13.	Prairie	Terry	Interstate
		Fallon	Interstate
14.	Richland	Sidney*	Preferred, Interstate
		Fairview	Preferred, Interstate
15.	Sanders	Thompson Falls*	Preferred
		Plains	Preferred
16.	Sheridan	Plentywood*	Hi-Line
		Westby	Hi-Line
17.	Sweet Grass	Big Timber	Interstate
18.	Valley	Glasgow*	Hi-Line
		Opheim	Hi-Line
19.	Wheatland	Harlowton	Preferred
		Two Dot	Preferred

\* County Seat.



### 2.3 Questionnaire Development

Two questionnaires were developed as research instruments for the Public Attitude Assessment Program: one for county level interviews and one for community level interviews. The same general structure was used for both questionnaires and consisted of:

- 1) A brief introduction identifying the researcher and the purpose of the interview, and summarizing the proposed Northern Tier Pipeline project.
- 2) Questions regarding the respondent's previous experience with pipeline construction and knowledge of the Northern Tier project.
- 3) General questions regarding types of impact the respondent might expect.
- 4) More specific questions concerning the respondent's opinion on individual impact issues and possible mitigation measures.
- 5) Questions regarding general demographic characteristics of the respondent (age, sex, occupation, education, etc.).
- 6) A question regarding any other issues regarding the proposed pipeline with which the State of Montana ought to be concerned.

Questions regarding the types of impact and possible mitigation measures were differentiated at the county and community levels. The issues on which the questioning focused were based upon previous work carried out by Mountain West Research, identifying possible socioeconomic impacts from pipeline construction projects.<sup>1</sup> In addition, the surveys solicited opinions on several issues specific to impact mitigation measures. Besides asking what could be done to lessen impacts mentioned by the respondent, specific questions on construction camps and land uses to be avoided were included.

On the whole, the questions asked were open-ended, restricting the respondent in neither the type nor number of responses. The disadvantage of such questions is that their responses are often so broad and divergent that they pose significant coding and interpretation problems. The advantage is that respondents are able to voice their own opinions and identify their own topics, rather than being forced to choose among pre-formulated options.

Draft county and community questionnaires were prepared for review and comment by DNRC. Suggested modifications were incorporated and the revised questionnaires were pretested in Stillwater County and in the City of Columbus.

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<sup>1</sup>Mountain West Research, Inc. Pipeline Construction Worker and Community Impact Surveys, prepared for the Northern Tier Pipeline Company, Billings, Montana, 1979.



Based upon results of the pretest, final draft questionnaires were prepared, submitted to DNRC, and printed for use in the field.

## 2.4 Sampling and Field Procedures

### 2.4.1 Overview

Since probability samples for the PAAP surveys were ruled out at its inception, rigorous stratified sampling procedures were not necessary. However, to be representative, the surveys had to sample as broad and balanced a range of opinion as possible within the limits of 5-7 interviews per county and 9 interviews per community. Thus, categories of potential respondents were developed for both the county and community survey components. The categories were designed to capture a range of opinion and expertise. Respondents were selected from within each category on a random basis.

In general, both the county and community surveys relied on "key respondent" (also known as "key informant") interviews. The community survey component also included three randomly selected citizens, both to check on the representativeness of key respondent interviews and to enable the opinions of ordinary citizens to be recorded. As it turned out, there were no significant differences between the attitudes of key respondents and randomly selected citizens.

The county and community survey components were carried out simultaneously by two field teams, each composed of two experienced interviewers. Questionnaires were administered personally by the interviewers, except in those cases where a key respondent was not available. In the latter case, the interview was conducted by telephone.

The sampling procedures used in conducting the surveys are outlined below. Additional details are found in Appendix E.

### 2.4.2 County and Community Sampling Procedures

Time and budget constraints required that relatively few persons be selected as respondents. The objectives of the study dictated that those selected be as representative of public opinion as possible. As described above, two separate samples were selected for the study, one of county respondents and one of community respondents. In order to obtain a balanced and efficient sample,



a two-tiered sampling procedure was developed for each level-county and community. First, general categories, such as "elected officials" and "private landowner/employer" were formulated in such a way as to ensure representation of groups or positions with influential or strong views on the pipeline as well as the "general public." The categories are discussed below. For each of these categories, a more specific list of positions or descriptions was developed to provide representation of diversity within the category. The positions or descriptions on the list were sufficiently precise to identify an individual for inclusion in the sample. In most cases, the list of positions/descriptions within each category had more elements than the sample size required. Aside from a very few positions which were considered important enough for 100 percent representation, the elements of the list were selected for inclusion in the sample on a random basis to minimize sampling bias.

Several general procedures for sample definition were followed:

- 1) A respondent could not be selected for both the county and the community surveys;
- 2) An individual already interviewed under one of the specific respondent categories, who was referred to by other respondents as a key spokesperson for the community, was reclassified as a spokesperson. Another respondent from the individual's original category was then selected and interviewed as a replacement;
- 3) The County and Community Tally Sheets were filled in to keep a record of the population from which the sample was drawn, the individuals selected and those finally interviewed (see Appendix E).

#### Community level

A total of nine people were interviewed at the community level. The nine were randomly selected from four categories. The random selection methods for these categories are as follows:

- 1) City Government Representative -- Flip of a coin; if randomly selected person was not available, the other person indicated was interviewed.
- 2) Public and Private Technical Representatives -- Random number table was used to select three from the list of nine. If person(s) selected was (were) not available, another (others) was (were) randomly selected from the nine.



- 3) Ordinary Citizens -- Random number table used to select three public places from the list of 12. If community had more than one of a randomly selected public place, then the first one encountered was used. Once in the public place, the first person who came in was interviewed. If no one came in within five minutes, the clerk, bartender, etc., was interviewed. If town had just two public places indicated on list, a coin was flipped to decide which would have two interviews and which would have one. The interviews were carried out consecutively. If town had just one public place, all the interviews were conducted consecutively in the one place.
- 4) Identified Community Spokespersons -- At the end of each community interview, the respondent was asked to name influential people or spokespersons in the community. The person named most frequently was selected followed by the second most frequently named person. If more than two people were named an equal number of times for the top slot, then the random number table was used to select two. If the top person was identified but there was a tie for second, then: a) a coin was flipped if it was between two; or b) the random number table was used if more than two were involved.

#### County level

A total of five interviews were completed at the county level if the county had been designated as an impacted county. In counties not designated as potentially impacted, a sixth interview was carried out with a key official representing the largest town. The County Tally Sheet (see Appendix E) was used to implement the selection methods listed below:

- 1) County Commissioner -- The chairman of the County Commissioners was interviewed. If s/he was not available, then a supplementary telephone interview was attempted. If the chairman could not be interviewed personally, another County Commissioner was selected and interviewed. A coin was flipped to choose among two commissioners. If there were more than two, the random number table was used to select one.
- 2) Elected Official -- The random number table was used to select one of the four potential respondents listed. If the selected person was not available, the process was repeated.
- 3) Technical or Appointed Official -- Same procedure as 2) above, except that one person was randomly selected from five.
- 4) Private Landowner/Employer -- Based on recommendations from other respondents, the person who best represented this category was chosen; i.e., the largest private landowner or employer. If several potential respondents were identified, the random number table was used to select one.
- 5) Environmentalism/Preservationist -- One was selected as in 4) above.



- 6) Representative of Largest Town (if County not Identified as Potentially Impacted County) -- Flip of coin to select one respondent from the two listed. If randomly selected person was not available, then the other person was interviewed.

## 2.5 Data Processing

Data processing methods concerned the coding of completed questionnaires to enable their keypunching on computer cards and recording on magnetic tape, data vetting (cleaning) to organize the coded information in a consistent format for manipulation and analysis, and the processing of the information utilizing statistical routines available in the Statistical Package for the Social Sciences (SPSS) program.

### 2.5.1 Coding

Midway through the field portion of the attitude assessment survey, a sample of completed county and community questionnaires was drawn. All answers to each question were noted down so that the range of responses to each question was evident. Responses were grouped by subject; i.e., demographic effects, economic effects, land use, etc. Numbers or codes were assigned to each major response. In order to avoid overgeneralization from responses, a relatively high number of individual responses were coded.

The codes were then assembled for both county and community questionnaires and the responses to each question were coded in the left-hand margin of each completed questionnaire. The coding instructions for this process are included in Appendix B.

Once coded, the responses to each questionnaire were key-punched on computer cards and verified. Four cards were required per community questionnaire and three per county questionnaire. The verified cards were then read onto magnetic tape.

### 2.5.2 Data Vetting

Even though all questionnaires were 100 percent verified when keypunched, mistakes were discovered in the cards returned. An ad-hoc FORTRAN program was written to check card sequencing. Problems discovered were checked and corrected by hand until each data set had the appropriate number of cards in



the correct order for each case. The schedule did not permit any further data checking or correction.

### 2.5.3 Processing Techniques

After vetting, the data was processed through four steps: common formatting, frequencies, variable construction, and cross-tabulation.

#### Common formatting

For convenience in the coding, a different data format was used for the county questionnaire than was used for the community instrument. In processing, however, it was convenient to have all the data in one common format. The first data processing stage, therefore, was to recode so that all data were in a common format. This was accomplished by an ad-hoc FORTRAN program. The resultant format is displayed in the codebook (see Appendix B). County and community results can be considered separately by sorting on Variable 1, the county/community indicator.

#### Frequencies

Frequencies for all values of each variable in the file were computed by the SPSS package. These are contained in the computer printout.

#### Variable construction

Inspection of the frequency distributions provides a great deal of useful information; but, in some cases recoding and further manipulation of the data was required to develop more usable variables.

Frequently in the survey, respondents were encouraged to provide multiple answers to a single question. These answers, when coded, become separate variables, and are cumbersome to deal with. In order to organize the information from these answers in a more convenient form, "dummy variables" are created. In this case, the dummy variable is used to represent a particular answer or category of answer which occurs in the responses to the original question. For each dummy variable (or each category of answer; for example, "economic benefits") a value of one or zero is assigned depending upon whether the particular answer was among those given by the respondent. In this way it is possible to determine



the number of respondents who mentioned "economic benefits" (for example) at least once in response to the question being considered, and the number who did not. A similar process can create a dummy variable for "tax benefits" or "adverse effects on facilities," if such responses were given to the question being considered.

In addition to the creation of this type of dummy variable, a few other variables were constructed, and some recoding was done to reorganize or collapse overly detailed codes. These changes are detailed in the appropriate place in the code book.

#### Cross-tabulation

Cross-tabulation was the main analytical technique utilized in the analysis of these data. The cross-tabulations, which match responses on one variable with responses on another, were computed by the SPSS package, using recordings performed by the same ad-hoc FORTRAN program which did the variable construction. With this technique it is possible to separate and compare answers given by each category of respondent, and to determine the relationship between responses to two (or more) questions.

#### 2.5.4 Data Bank

The data remains available for further analysis. Its current form is described by the code book in Appendix B. It should be noted that this form is quite different from the cards which were originally punched. These data could be made available in card or magnetic tape form.



### 3. STUDY RESULTS

Since many of the same questions appeared on both the community and county survey forms, responses were merged as often as possible. Notations have been made in tables to identify questions asked of only one group.

#### 3.1 Respondent Profile: Achieved Sample

##### 3.1.1 Types of Respondents

A total of 517 people were interviewed in the public attitude assessment survey. As described in Section 2.4.2, individuals were selected as representatives of a number of "respondent categories": elected county officials, technical or appointed officials, major landowners and employers, environmentalists/preservationists, city government representatives, private sector representatives, randomly selected citizens, and community spokespersons. Table 3-1 shows the number of people interviewed in each of these categories as well as the distribution of respondents among the sub-categories.

Ninety-two elected county officials were interviewed. This category of respondents included county commissioners (47 interviewed), and others-sheriffs, county assessors, county clerks, and school superintendents, (45 interviewed) - and makes up a rather large portion of the sample (17.8 percent).

Technical or appointed officials, including agricultural extension agents, county planners, planning board members, conservation district representatives, county engineers, and job service representatives account for an additional 45 people, and 8.7 percent of the sample. Fewer county engineers and job service representatives were interviewed than others in this group because these positions did not exist in many of the less populated counties.

Twenty-six large private landowners (5 percent of the sample) and 12 major private employers (2.3 percent) were interviewed. In several of the communities surveyed, the major private employer was also identified as a community spokesperson. In these cases an interview with a landowner was added to balance the representation.



Category	Sub-Category	Absolute Frequency		Relative Frequency (%)	
		Category	Sub-Category	Category	Sub-Category
Elected County Official	County Commissioner Sheriff County Assessor or Auditor County Clerk School Superintendent	92		17.8	9.1
					2.1
					1.7
					2.5
					2.3
Technical or Appointed Official	Agriculture Extension Agent County Planner County Planning Board Member Conservation District Representative County Engineer Job Service Representative	45		8.7	2.7
					1.7
					0.4
					2.7
					0.9
Landowner or Employer	Large Private Landowner Major Private Employer	38		7.3	5.0
					2.3
Environmentalst/Preservationist		33		6.4	
City Government Representative	Mayor City Clerk City Council Member City Engineer Town/City Planner	75		14.5	3.7
					4.4
					4.8
					0.6
					1.0
Private Sector Representative	C of C or Business Leader Health Care Provider Motel or Restaurant Owner Newspaper Owner/Editor	69		13.3	4.4
					2.9
					3.7
					2.3
Random Selected Citizen		98		19.0	
Community Spokesperson		67		13.0	
TOTAL		517		100.0	100.0



Since employers who are also spokespersons were counted only in the spokesperson category, the sample as shown in Table 3-1 appears to have a preponderance of landowners, although it really does not.

An attempt was made to interview an environmentalist/preservationist in each of the 38 counties. However, in five counties, persons representative of this viewpoint could not be located, with the result that only 33 respondents in this category were interviewed (6.4 percent of the sample).

City government representatives, including mayors, city clerks, council members, engineers, and planners accounted for 75 interviews (14.5 percent of the sample). Because many of the communities included in the study had neither a city engineer or a planner, these sub-categories made up only a small percentage of the total sample (1.6 percent).

The group private sector representatives included 69 respondents or 13.3 percent of the total. This category included Chamber of Commerce members, business leaders, health care persons, motel or restaurant owners, and newspaper owners/editors. Randomly selected citizens were the largest category, with 94 respondents. These respondents who were selected to represent the general population of the community, made up 19.0 percent of the total sample. Individuals identified by other respondents as community spokespersons made up 13.0 percent of the sample (67 interviews).

In summary, random citizens made up a larger portion of the sample than any other single group (19.0 percent). However, 81 percent of these interviewed were selected because they were in influential or leadership positions, or because they were identified as knowledgeable about their local areas or concerned about the proposed pipeline.

### 3.1.2 Geography of Respondents

The number of people interviewed in each county and community is shown in Table 3-2. In counties which risk significant impact from the proposed pipeline, county level interviews using the county questionnaire were conducted with six or seven people selected according to the sampling procedures outlined in



TABLE 3-2

## The Number of Interviews in Each County and Community

County	Community	Absolute Frequency	Relative Frequency (%)
Blaine	Chinook*	7	1.4
Broadwater	Townsend*	6	1.2
Carbon	Red Lodge*	6	1.2
Cascade	Great Falls*	6	1.2
Chouteau	Ft. Benton*	7	1.2
Custer	Miles City*	14	2.7
Daniels	Scobey*	14	2.7
"	Flaxville	9	1.7
Dawson	Glendive*	14	2.7
"	Richey	9	1.7
Deer Lodge	Anaconda*	6	1.2
Fergus	Lewistown*	15	2.9
"	Denton	9	1.7
Gallatin	Bozeman*	6	1.2
Garfield	Jordan*	14	2.7
Golden Valley	Ryegate*	6	1.2
Granite	Philipsburg*	6	1.2
Hill	Havre*	6	1.2
Jefferson	Boulder*	6	1.2
Judith Basin	Stanford*	6	1.2
Lewis & Clark	Helena*	6	1.2
McCone	Circle*	14	2.7
"	Vida	9	1.7
Meagher	White Sulphur*	14	2.7
"	Martinsdale	9	1.7
Missoula	Missoula*	6	1.2
Musselshell	Roundup*	14	2.7
Park	Livingston*	15	2.9
"	Clyde Park	9	1.7
Petroleum	Winnett*	14	2.7
Phillips	Malta*	15	2.9
"	Saco	8	1.5
Powell	Deer Lodge*	15	2.9
"	Ovando	9	1.7
Prairie	Terry*	14	2.7
"	Fallon	9	1.7
Richland	Sidney*	15	2.9
"	Fairview	9	1.7
Rosebud	Forsyth*	7	1.4
Sanders	Thompson Falls*	14	2.7
"	Plains	9	1.7



TABLE 3-2 (continued)

County	Community	Absolute Frequency	Relative Frequency (%)
Sheridan	Plentywood*	14	2.7
"	Westby	9	1.7
Silver Bow	Butte*	6	1.2
Stillwater	Columbus*	8	1.5
Sweet Grass	Big Timber*	15	2.9
Treasure	Hysham*	7	1.4
Valley	Glasgow*	14	2.7
"	Opheim	9	1.7
Wheatland	Harlowton*	14	2.7
"	Two Dot	9	1.7
Yellowstone	Billings*	6	1.2
TOTAL		517	100.0

\* County seat: county level interviews were not necessarily all carried out in the county seat.



Section 2.4.2 (county). Most of these interviews took place in the county seat. In these counties, community level interviews using the community questionnaire were administered to eight or nine people in the county seat and except in five cases, in another small community in the county.<sup>1</sup> In each community, the sample was selected according to the procedures outlined in Section 2.4.2 (community). This usually resulted in a total of 23 or 24 interviews in each "impacted" county. Counties which were not at significant risk of impact were sampled more lightly, and only county level interviews were conducted. In these counties, a total of six or seven people were interviewed, many from the county seat.

The number of interviews carried out per 10 miles of proposed corridor is shown in Table 3-3. More interviews were conducted in communities along the Preferred route than along the other routes. However, overall, the difference in the number of interviews per corridor is not an important factor.

The distribution of communities and of interviews by size of community is displayed in Table 3-4. Small communities were selected for study more frequently than large communities. The smallest communities, those with populations of 1,000 or less, were most heavily represented (20 communities, 191 interviews) followed by small communities, those with populations between 1,001 and 2,000 (12 communities, 147 interviews). Fewer interviews were conducted in those communities with populations between 2,001 and 6,000 (87 interviews) and those with over 6,001 people (97 interviews).<sup>2</sup> Communities of over 6,000 were generally considered large enough to absorb the impacts of a pipeline project without undue stress if heavy demands on transient lodging and public services do not already exist.

### 3.1.3 Demographic Characteristics of Respondents

Various demographic characteristics of the study sample are presented in Tables 3-5 to 3-10 and are discussed in the following section.

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<sup>1</sup>In five less populated counties - Custer, Garfield, Musselshell, Petroleum, and Sweet Grass - community interviews were conducted only in the county seat.

<sup>2</sup>The size categories were developed to represent the distribution of communities actually studied.



TABLE 3-3

## Number of Interviews Per 10 Miles of Corridor

Corridor	Length in Miles*	Interviews**	Interviews/ 10 miles
Preferred	629	221	3.5
Hi-Line	524	112	2.1
Lewistown Cutoff	180	50	2.8
Interstate	629	193	3.1

\* The Hi-Line and Interstate corridors do not include the first 111 miles of the Preferred corridor. The Lewistown Cutoff does not include common elements of the Preferred and Hi-Line corridors.

\*\* Interviews total more than 517, because two corridors pass through some counties. Interviews in these counties have been counted in both corridors.

TABLE 3-4

## Number of Interviews by Community Size

Community Size	Communities		Interviews	
	Absolute Frequency	Relative Frequency	Absolute Frequency	Relative Frequency (%)
10-1000	20	38.5	191	36.9
1001-2000	12	23.1	147	28.4
2001-6000	9	17.3	87	16.8
6000 +	11	21.2	92	17.8
TOTAL	52	100.0	517	100.0

\* Interviews total more than 517, because two corridors pass through some counties. Interviews in these counties have been counted in both corridors.



TABLE 3-5

## Age of Respondents

Age	Absolute Frequency	Relative Frequency (%)
Up to 29	68	13.3
30 - 49	104	20.3
40 - 49	122	23.8
50 - 59	114	22.3
60 +	104	20.3
No Response	5	Missing
TOTAL	517	100.0

TABLE 3-6

## Education of Respondents

Years/Level of Education	Absolute Frequency	Relative Frequency (%)
6 - 11	57	11.1
High School	194	37.7
College	82	16.0
BA - BS	116	22.6
Higher	65	12.6
No Response	3	Missing
TOTAL	517	100.0



TABLE 3-7

## Sex of Respondents

Sex	Absolute Frequency	Relative Frequency (%)
Male	408	78.9
Female	109	21.1
TOTAL	517	100.0

TABLE 3-8

## Occupation of Respondents

Occupation	Absolute Frequency	Relative Frequency (%)
Professional/Managerial	170	33.7
Service/Clerical/Misc.	195	38.6
Agriculture/Forestry	140	27.7
No Response	12	Missing
TOTAL	517	100.0



TABLE 3-9

## Respondents' Years in Locale

Years	Absolute Frequency	Relative Frequency (%)
1 - 5	91	17.7
6 - 15	78	15.1
16 - 76	346	67.2
No Response	2	Missing
TOTAL	517	100.0

TABLE 3-10

## Respondents' Membership in Organizations\*

Organization	Number of Memberships
Chamber of Commerce	78
Local Boards	124
Environmental	38
Agricultural	40
Political	31
Service	190
Social	224
Professional	31
No Response or None	(164)
TOTAL MEMBERSHIPS	756

\*Three responses were allowed for each person.



The mean age of those interviewed was 46.2 years. Over 66 percent of the respondents were 40 years of age or older, and almost 43 percent were 50 years or older. Only 13.3 percent of those interviewed were younger than 30 years old. This age distribution is considered typical of a sample designed to include primarily leaders of county and community government, industry, agriculture, and opinion.

Also reflecting the heavy selection of community and county leaders, the educational level of the respondents was comparatively high. Eight-nine percent of those responding had at least a high school degree, and 35 percent held bachelor degrees or higher.

The selection criteria also influenced the male/female and occupational representation in the sample. Males made up 78.9 percent of the respondents, and 33.7 percent of those responding were in professional, technical, or managerial occupations. An additional 27.7 percent were in agricultural or related occupations and 38.6 percent were employed in clerical, service, or other types of occupations.

A large majority of the respondents (67.2 percent) were long-term residents of their community or area, having lived there for 16 years or more. Only 15.1 percent of those interviewed (91 respondents) have lived in the area for 5 years or less. The mean length of residence in the community for the sample was 28.3 years.

Sixty-nine percent of the respondents stated that they were active in some organization or committee in their community. Table 3-10 shows the participation pattern of those interviewed in different types of organizations. It should be noted that the figures in this table represent memberships, and not individuals, since it is possible that a single person could indicate membership in two or three organizations of a similar type. Of the 517 people interviewed, 164 either did not participate in any organization or did not respond to the question. Membership on local boards or advisory committees was mentioned 124 times, and memberships in service organizations numbered 190, while those in environmental and agricultural organizations



were 38 and 40 respectively.

This demographic profile shows that the respondents tended to be older, better educated male members of the study communities who were long-time residents of the locale and who were engaged in government, business, or agriculture. They were generally active members of community organizations and participants on local boards and commissions.

This profile is consistent with the intention of the sampling procedure, which was to select leaders and influential members of the study counties and communities.

#### 3.1.4 Other Influential Factors

Several additional variables were expected to influence the attitudes people had toward the proposed Northern Tier project. Two such variables were knowledge of the project and past experience with pipelines and/or other construction projects. Each respondent was asked about previous knowledge of the Northern Tier project. Over 93 percent of the respondents said they had some knowledge about the project. When asked whether they had had contact with or were familiar with pipeline projects, 37.8 percent of those interviewed said yes, and almost half of these (87 people) claimed to have had experience with the actual pipeline construction process. Tables 3-11 and 3-12 show these results.

Another factor considered important to attitudes about the pipeline was exposure to and experiences with temporary work forces. When asked about the presence of temporary work crews in the county or community, 86 percent of all respondents indicated that temporary workers had been housed in their communities, and 54 percent reported this to have occurred within the past two years. Tables 3-13 and 3-14 show the response patterns for these questions.

The size of the work force housed in the community was also considered a factor, so respondents were asked to estimate this for the construction projects they identified. The distribution in size of the 392 work crews mentioned by the respondents is shown in Table 3-15. As can be seen in this table, the number of workers temporarily housed in the community was estimated at 25 or



TABLE 3-11

Number of Respondents Who Had Previously Heard  
of the Northern Tier Project

Response	Absolute Frequency	Relative Frequency (%)
Yes	481	93.2
No	35	6.8
No Response	1	Missing
TOTAL	517	100.0

TABLE 3-12

Previous Contact with Pipelines and  
Experience with Pipeline Construction

Response	Absolute Frequency	Relative Frequency (%)
Previous contact	195	37.8
(Previous experience - construction)	(87)	(16.8)
No previous contact	321	62.2
No Response	1	Missing
TOTAL	517	100.0



TABLE 3-13

## Other Temporary Work Forces

Response	Absolute Frequency	Relative Frequency (%)
Yes	442	91.0
No	44	9.0
No Response	31	Missing
TOTAL	517	100.0

TABLE 3-14

Recency of Work Forces Housed  
(Most recent experience)

Response	Absolute Frequency	Relative Frequency (%)
2 years or less	279	74.6
3 to 5 years	46	12.3
6 or more years	49	13.1
No Response	143	Missing
TOTAL	517	100.0



TABLE 3-15

## Sizes of Work Forces Housed \*

Work Force Size	Absolute Frequency
1 - 10	52
11 - 25	93
26 - 50	112
51 - 100	58
101 - 200	26
201 +	51
No Response (respondents)	(185)
None	( 44)
TOTAL Number of Work Forces	392

\*Three responses per interview were coded; 229 respondents did not answer at all.



less in 145 instances, at between 26 and 50 in 112 cases and at 50 or more 135 times. Many respondents gave multiple examples, and only 44 said that no such crews had been lodged in their community. However, 185 of the 517 respondents (35.8 percent) did not respond to the question or said they did not know the size. As shown in Table 3-16, 86 respondents (23 percent of those answering) said that their community had housed a work force of over 50 people within the last five years, while 290 said that theirs had not.

It was expected that the size of the community would be directly related to size of previous work forces housed. This was indeed the case; 50.8 percent of the respondents from towns with a population of more than 6,000 mentioned housing large work forces recently, and only 11.3 percent of respondents from towns with 1,000 people or less mentioned a recent temporary work force of more than 50 workers. Table 3-17 shows this relationship in more detail.

To summarize, almost all of the respondents had heard of the Northern Tier project before the interview and over a third of the respondents claimed to have had experience with other pipeline projects. The majority of respondents reported fairly recent prior experience with temporary workers staying in their communities, many with work forces of similar size to that expected with construction of the proposed pipeline. In general, community size was directly related to recent experience in housing a large temporary work force with larger communities more likely to have had experience, but there were some exceptions. Respondents in some of the smaller communities stated that only a few of the workers would want to stay there anyway, the rest preferring to locate in larger towns nearby.



TABLE 3-16

Previous Work Force of 50 or More  
5 Years Ago or Less

Response	Absolute Frequency	Relative Frequency (%)
Yes	86	22.9
No	290	77.1
No Response	141	Missing
TOTAL	517	100.0

TABLE 3-17

Responses by Community Size and Previous Presence of Large Work Force

Community Size	Yes	No	Number of Responses by Community Size
10 - 1000	15 (11.3%)	118 (88.7%)	133 (35.4%)
1001 - 2000	19 (17.6%)	89 (82.4%)	108 (28.7%)
2001 - 6000	19 (27.1%)	51 (72.9%)	70 (18.6%)
6000 +	33 (50.8%)	32 (49.2%)	65 (17.3%)
TOTAL*	86 (22.9%)	290 (77.1%)	376 (100.0%)

\*The 141 respondents who did not answer are excluded from this table.



### 3.2 Public Attitudes Toward the Proposed Project

#### 3.2.1 General Expectations

##### Total sample

When respondents were asked what effect they thought the presence of pipeline workers for 2 - 4 months might have on their locale, 118 (23.7 percent of those responding) said that there would be no impact or no problems. As shown in Table 3-18, the greatest percentage of those who thought some effect might occur, said that it would be an economic benefit, such as expansion of the local economy or help to local business (34.4 percent). Other benefits of a non-specific nature were mentioned by 7.4 percent of those responding. References to inadequate housing, or adverse effects on facilities and services such as schools and law enforcement, made up 17.5 percent of the responses, and an additional 7.3 percent were to other adverse effects such as social disruption (including bar fights), increased prices, and adverse effects on land and land-owners. About 10 percent of the responses concerned population influx, with no clear indication that it was considered as either a bad or good effect. Of all the responses to this question, the effect mentioned appears to be negligible or neutral in 33.8 percent, beneficial in 41.8 percent, and adverse in 24.8 percent.

However, in the subsequent question where respondents were asked if the effects just identified were good, bad, or some of both, 46.2 percent of all those interviewed (49.3 percent of those responding) said "some of both" while 46.2 percent (47.6 of those responding) said "good." Only 2.7 percent said "bad," while 6.4 percent did not respond or didn't know. These results are shown in Table 3-19. Most of those who had cited an adverse effect on the previous question also foresaw some beneficial effect and therefore responded "some of both" to this question. Of those who responded that the pipeline would have no impact or effect on their locale, it is likely that many took into consideration the ability of the community to respond to the changes and were saying that they did not expect either significant benefits or problems to result.



TABLE 3-18

## Predicted Impacts from Pipeline Workers

Type of Impact	Absolute Frequency	Relative Frequency (%)
No effect or problem	118	23.7
Economic benefit	171	34.4
Non-specific benefit	37	7.4
Housing & Facility Adverse	87	17.5
Other Adverse	36	7.3
Population Influx	50	10.1
No Response	20	Missing
TOTAL	517	100.0

TABLE 3-19

## Attitudes Toward Presence of Pipeline Workers

Impact of Presence	Absolute Frequency	Relative Frequency (%)
Good	231	47.6
Bad	14	2.9
Some of Both	239	49.3
No Response	33	Missing
TOTAL	517	100.0



The respondents were then pressed to cite first any possible beneficial effects and then possible detrimental effects of a temporary influx of pipeline workers. Table 3-20 shows the responses made to the beneficial effects question. Of the beneficial effects identified, 78.6 percent concerned economic benefits, 3.8 percent concerned community growth, and 11.3 percent concerned other or non-specific benefits. No answer or an indication that no effect occurred was given by 6.3 percent of the respondents. Table 3-21 breaks down the adverse effects mentioned. Of the 517 people interviewed, 31.3 percent gave no response or said that no adverse effects occurred. Of those who did identify an adverse effect, 7.4 percent cited strain on housing; and 30.4 percent cited strain on facilities. Social problems, especially fighting and troublemaking, were mentioned by 29.0 percent; and land problems were mentioned by 18.6 percent. Economic and other problems were identified by the remaining 14.6 percent of those who responded.

#### Community survey

Of the 298 people interviewed in the community survey, 114 (38.4 percent) stated that the presence of pipeline workers for a few months would affect them personally. As shown in Table 3-22, over half of these (57.0 percent) felt that their business would increase, 21.9 percent said they would have more work to do on their jobs, and 13.1 percent said their land would be adversely affected. This question was not asked in the county survey.

#### Sub-group differences

The respondents were divided into groups according to their proximity to the proposed corridor for the pipeline in order to see if responses to these questions concerning the effect of pipeline workers differed among the groups. As shown in Tables 3-23 and 3-24, some differences did emerge. Respondents along the preferred corridor were most likely and those along the interstate corridor were least likely to indicate that some impact or effect of the temporary influx of pipeline workers would occur. Those along the Lewistown Cutoff were about in the middle. Considering the percentage of respondents in each corridor who indicated an expectation of some impact, a surprisingly high percentage of respondents near the Lewistown Cutoff corridor (66.7 percent) anticipated economic benefits. This exceeds the expectation of economic benefit in all other groups, even those along the Preferred corridor (57.7 percent) where



TABLE 3-20

## Predicted Benefits of Pipeline Construction

Type of Benefit	Absolute Frequency	Relative Frequency (%)
Economic	187	78.6
No Effect or Problem	15	6.3
Growth	9	3.8
Other	27	11.3
No Response	279	Missing
TOTAL	517	100.0

TABLE 3-21

## Predicted Adverse Impacts of Pipeline Construction

Type of Impact	Absolute Frequency	Relative Frequency (%)
Housing	26	7.4
Facilities	108	30.4
Social	103	29.0
Land	66	18.6
Economic & Other	52	14.6
No Response	162	Missing
TOTAL	517	100.0



TABLE 3 - 22

## Personal Effects of Pipeline Construction

Type of Effect	Absolute Frequency	Relative Frequency (%)
Misc. effects	9	3.1
Increase business	65	22.1
More to do on job	25	8.5
Adverse effect on land	15	5.1
No effect	180	61.2
Don't know, no response*	54	Missing
TOTAL	298	100.0

\*This question was asked only in the community survey.



TABLE 3-23

## Impact from Project by Corridor

Corridor	Impact		No Impact	
	Absolute Frequency	Relative Frequency	Absolute Frequency	Relative Frequency
Preferred	124	79.5%	32	20.5%
Hi-Line	78	73.6%	28	26.4%
Lewistown Cutoff	27	75.0%	9	25.0%
Interstate	93	69.4%	41	30.6%
Combined*	48	68.6%	22	21.4%
No Response	--	--	15	--
TOTAL	370	73.7%	132	26.3%

\*Responses from counties and communities potentially affected by more than one corridor alternative.

TABLE 3-24

## Expectation of Economic Benefits from Project by Corridor

Corridor	Economic Benefits Mentioned		No Economic Benefits Mentioned	
	Absolute Frequency	Relative Frequency	Absolute Frequency	Relative Frequency
Preferred	90	57.7%	66	42.3%
Hi-Line	59	55.7%	47	44.3%
Lewistown Cutoff	24	66.7%	12	33.3%
Interstate	64	47.8%	70	52.2%
Combined*	28	40.0%	42	60.0%
TOTAL	265	52.8%	237	47.2%

\*Responses from counties and communities potentially affected by more than one corridor alternative.



the expectation of overall impact was highest.

### Summary

Overall, the majority of respondents saw the presence of pipeline workers in their communities for 2-4 months as beneficial. The major benefit cited was an increase in the local economy and revenue to local businesses. Those respondents who saw adverse aspects of a temporary work force also tended to see some economic benefits. The adverse effects most often foreseen were excess demands on housing and public facilities, although other adverse effects such as social disruption and detrimental impacts on land and landowners were also mentioned.

### 3.2.2 Lodging

#### Total sample

Table 3-25 shows the number of workers that respondents thought their communities could accommodate. Despite the fact that 36.9 percent of those in the sample were from small communities of fewer than 1000 people, only 23.9 percent of those who responded to this question said that their community could house no more than 25 workers. About 25 percent said that their community could house between 25 and 70 workers; another 25 percent said that it could accommodate between 71 and 199 workers; and the last 25 percent reported that their communities could house over 200 temporary workers.

Table 3-26 shows the respondent estimates of housing availability as a function of the size of the community. As expected, the highest percentage of respondents indicating that only between 0-25 workers could be accommodated were from communities smaller than 500 people. Two-thirds of those indicating such limitations on housing availability were from these small towns. Conversely, 75 percent of those indicating sufficient housing for 200 more workers were from towns of 6000 or more residents.



TABLE 3-25

## Additional Lodging Capacity in Locale

Number of Workers that could be accommodated	Absolute Frequency	Relative Frequency (%)
0 - 25	101	23.9%
25 - 70	111	26.2
71 - 199	106	25.1
200 +	105	24.8
No Response	94	-
TOTAL	423	100.0

TABLE 3-26

## Additional Lodging Capacity As A Function of Community Size

Community Size (Population)*	Number of Workers That Could Be Accommodated				
	0-25	26 - 70	71 - 199	200 +	Total
10 - 500	72 (66.7%)	25 (23.1%)	9 (8.3%)	2 (1.9%)	108 (25.5%)
500 - 1000	6 (11.1%)	26 (48.1%)	18 (33.3%)	4 (7.4%)	54 (12.8%)
1001 - 2000	11 (9.5%)	42 (36.6%)	38 (32.8%)	25 (21.6%)	116 (27.4%)
2001 - 6000	12 (16.4%)	15 (20.5%)	26 (35.6%)	20 (27.4%)	73 (17.3%)
6000 +	0 (0%)	3 (4.3%)	15 (20.8%)	54 (75.0%)	72 (17.0%)
No Response			94		
TOTAL	101 (23.9%)	111 (26.2%)	106 (25.1%)	105 (24.8%)	423 (100%)

\*1970 Census.



In general, most respondents felt that their communities could accommodate a significant number of temporary workers. Those living in smaller communities also tended to feel that there would be no overall problem housing workers, providing workers were spread out with several communities sharing the impact. Of course, such extensive spreading of construction activities usually does not occur on pipeline projects. The frequencies with which various types of temporary housing facilities were mentioned is presented in Table 3-27. ✓

Trailer courts or recreational vehicle parks made up 32.4 percent of the responses, while motels, hotels, and rental properties were mentioned 47.9 percent of the time, and other nearby towns 15.4 percent of the time. Only 3.4 percent of the respondents stated that workers could not or would not stay in their communities, and construction camps were mentioned in only six instances.

Of the 280 people who gave an answer when asked about the possibility of rooms for rent in private homes, 34.3 percent felt that none would be available; 42.8 percent felt that a few (0-10) might be available; and 8.9 percent said that some (11-25) might be available. Only 6.1 percent felt that over 26 such rooms might be available in their communities. Table 3-28 shows this breakdown of responses.

When posed the questions of alleviating housing problems, 10.7 percent said there would be no problems housing workers in their communities; 25.2 percent answered either that nothing could be done or that they didn't know what to do; and, 33.3 percent suggested that workers could bring their own mobile homes or that trailer courts could be expanded. As shown in Table 3-29, "Go to another town" was suggested by 18.1 percent of these respondents. Other solutions such as working with local housing officials were suggested by 7.3 percent. About 6 percent said that the company should provide facilities or that construction camps should be used.

When asked specifically if they thought housing workers in construction camps was better than trying to house them in local communities, 56.8 percent of those responding said "no." Table 3-30 shows this response pattern. Tables 3-31 and 3-32 show the reasons given when respondents were asked to explain their attitudes toward construction camps. About 60 percent of the persons who favored camps cited possible lack of room in the community. Of the



TABLE 3-27  
Where Pipeline Workers Would Stay

Type of Lodging	Absolute Frequency	Relative Frequency (%)
Trailer Courts/ RV Parks	216	32.4
Motel hotel	160	24.0
Rentals (trailer, houses, apts.)	159	23.9
Other town	103	15.9
Couldn't/wouldn't stay here	23	3.4
Construction Camps	6	.9
No Response/don't know	16	missing
Total Responses	667*	100.0

\*More than one answer was coded per respondent so the total number of responses exceeds 517.

TABLE 3-28  
Availability of Rooms in Private Homes\*

	Absolute Frequency	Relative Frequency (%)
None	96	34.3
0 - 10	120	42.8
11 - 25	25	8.9
26 - 200	17	6.1
Yes, no number	22	7.9
No Response or don't know	18	missing
TOTAL	298	100.0

\*This question was asked only with the community questionnaire.



TABLE 3-29

## Solutions to Housing Problems

Suggested Solution	Absolute Frequency	Relative Frequency (%)
No solution or don't know	127	25.2
Go to another community	92	18.1
No problem	54	10.7
Bring trailers/ add courts	169	33.3
Company provide/ construction camps	28	5.5
Other solutions	37	7.3
No Response	10	Missing
TOTAL	517	100.0

TABLE 3-30

## Attitude Toward Construction Camps

Attitude	Absolute Frequency	Relative Frequency (%)
Favor Camps	187	43.2
Do Not Favor	246	56.8
No Response	84	missing
TOTAL	517	100.0



TABLE 3-31

## Reasons Favoring Camps

Reason	Absolute Frequency	Relative Frequency (%)
No room	59	60.2
Other	39	39.8
No Response or not asked because opposed	419	missing
TOTAL	517	100.0

TABLE 3-32

## Reasons Against Camps

Reason	Absolute Frequency	Relative Frequency (%)
Camps cause problems	49	56.3
Better to stay in Communities	25	28.7
Other	13	15.0
No Response or not asked because favor camps	430	missing
TOTAL	517	100.0



87 who gave unfavorable responses towards setting up construction camps, 56.3 percent said that camps cause problems, and 28.7 percent said it would be better if workers stayed in the community. Factors related to approval of construction camps include community size and occupation of respondents. Table 3-33 illustrates that as the size of the communities increases, the proportion of people in favor of construction camps decreases (67.0% responded favorably in communities of 500 or less, while 23.3% responded favorably in communities of 6000+). Table 3-34 illustrates that a higher percentage of agriculturalists (50.9 percent) favored construction camps than did professional/managers (34.5 percent).

#### Sub-group differences

As shown in Table 3-35, respondents along the Cutoff and Interstate corridors felt that their communities could house more workers than did those along the other corridors. Table 3-36 shows that the same groups (those along the Cutoff and Interstate corridors) which felt their communities could house more workers were less likely to favor construction camps. Respondents along the Hi-Line corridor, where housing availability was generally considered low, were most in favor of construction camps.

There was also a difference between community and county respondents in attitude toward construction camps. Community respondents were more likely than county respondents to favor construction camps (49.4 percent vs. 33.1 percent). Interestingly, there was no significant difference in attitude toward construction camps between respondents from the eastern part of the states and those from the western part.

#### Summary

To summarize the results regarding housing for temporary workers, it was found that most respondents thought their communities could house a substantial number of pipeline workers. This was reported with some confidence in light of the fact that most communities had previously housed temporary work forces. Respondents in smaller communities generally felt that their communities could house a proportionate share of workers, but this would require that the workers be spread out over a fairly large area.



TABLE 3-33

Attitude toward Construction Camps As A Function  
of Respondents' Community Size

Community Size (Population) *	Favor Camps		Do not Favor Camps	
	Absolute Frequency	Relative Frequency (%)	Absolute Frequency	Relative Frequency (%)
10 - 500	77	67.0%	38	33.0%
500 - 1000	15	30.6	34	69.4
1000 - 2000	47	39.5	72	60.5
2000 - 6000	31	40.3	46	59.7
6000 +	17	23.3	56	76.7
No Response	84			
TOTAL	187	43.2%	246	56.8%

\* 1970 Census.

TABLE 3-34

Attitude toward Construction Camps As A Function  
of Respondents' Occupation

Respondents' Occupation	Favor Camps		Do not Favor Camps	
	Absolute Frequency	Relative Frequency (%)	Absolute Frequency	Relative Frequency (%)
Professional/ Managerial	50	34.5%	95	65.5%
Service/Clerical/ Misc.	74	44.3	93	55.7
Agriculture/ Forestry	56	50.9	54	49.1
No Response	95			
TOTAL	180	42.7%	242	57.3%



TABLE 3-35

Availability of Additional Local Lodging As A  
Function of Corridor

Corridor	Additional Capacity				Total
	0 - 25	26 - 70	71 - 199	200+	
Preferred	27 (22.3%)	40 (33.1%)	34 (28.1%)	20 (16.5%)	121 (28.6%)
Hi-Line	27 (26.7%)	29 (28.7%)	25 (24.8%)	20 (19.8%)	101 (23.9%)
Lewistown Cutoff	5 (15.6%)	6 (18.3%)	5 (15.6%)	16 (50%)	32 (7.6%)
Interstate	19 (17.1%)	26 (23.4%)	27 (24.3%)	39 (35.1%)	111 (26.2%)
Combined*	23 (39.7%)	10 (17.2%)	15 (25.9%)	10 (17.2%)	58 (13.7%)
No Response	94				
TOTAL	101 (23.9%)	111 (26.2%)	106 (25.1%)	105 (24.8%)	423 (100%)

TABLE 3-36

Attitude toward Construction Camps As A  
Function of Corridor

Corridor Alternative	Favor Camps		Do not Favor Camps	
	Absolute Frequency	Relative Frequency (%)	Absolute Frequency	Relative Frequency (%)
Preferred	64	49.6%	65	50.4%
Hi-Line	56	58.9	39	41.1
Lewistown Cutoff	8	26.7	22	73.3
Interstate	33	29.7	78	70.3
Combined*	26	38.2	42	61.8
No Response	84			
TOTAL	187	43.2%	246	56.8%

\* Responses from counties affected by more than one corridor alternative.



For the most part, respondents mentioned trailer and RV parks, motels, hotels, and other rentals as places where pipeline workers would stay. This is consistent with the usual pattern of pipeliners' lodging. When asked what could be done if there were problems housing workers, the most frequent answer was to bring in or add trailers and trailer facilities. Only a small portion thought it was the company's responsibility to solve housing problems. When asked specifically about construction camps, more people responded negatively than favorably toward them, although both opinions were well represented.



### 3.2.3 Community Facilities and Services

#### Schools

One area of concern when an influx of population occurs in a community is the impact on local schools. In response to this identified concern, the respondents were asked to estimate the number of additional students the schools in their community could absorb without difficulty. Table 3-37 shows the answers given to this question. Of those 248 people who gave an estimate (50 didn't know or did not answer), 66.9 percent thought that their schools could absorb 40 or more students. Previous data indicate that a pipeline construction work force of the size required for the Northern Tier project would generate approximately 40 students. Only 14.5 percent felt that their schools could handle fewer than 20 additional students. As indicated in Table 3-38, almost all of these respondents lived in the smallest communities (500 people or fewer), where, as discussed above, there were also housing constraints that would be very likely to limit the number of construction workers entering the community. In general, due to these housing constraints and the greater attraction of facilities, services, and amenities available in larger communities, few workers are likely to be housed in the smaller communities, and therefore limitations on school capacity should not be a problem, and generally was not anticipated as a problem by those interviewed.

Reflecting this evaluation, only 30 of the 825 responses (3.6 percent) made to the question concerning the respondents anticipation of effects on communities near pipeline construction projects involved schools, overcrowding in classes, or students.

#### Law enforcement

Respondents were asked if they anticipated any law enforcement problems from a pipeline project and the presence of pipeline workers in the local area. Responses to this question indicate no anticipation of major law enforcement problems. In fact, 56.3 percent of those responding said that they did not anticipate any law enforcement problems at all. As shown in Table 3-39, those respondents who identified problems identified minor problems such as trouble making and drunkenness (33.4 percent), the need for additional law enforcement manpower, or an increase of police work load (10.3 percent). Only 14 of



TABLE 3-37

Respondents' Opinions Regarding Capacity to Accommodate  
Additional Children in Schools\*

Additional Students	Absolute Frequency	Relative Frequency (%)
Less than 20	36	14.5
20 - 40	46	18.5
40 +	166	66.9
No Response	50	-
TOTAL	248	100.0

\* Asked on community questionnaire only.

TABLE 3-38

Respondents' Opinions Regarding School Capacity to Accommodate  
Additional Children As A Function of Community Size

Community Size (Population)	Additional Capacity			Total
	More than 20	20 - 40	40+	
10 - 500	26 (21.7%)	25 (26.0%)	45 (46.9%)	96 (38.7%)
500 - 1000	1 ( 3.3%)	6 (20.0%)	23 (76.7%)	30 (12.1%)
1000 - 2000	6 (11.3%)	13 (24.5%)	34 (64.2%)	53 (21.4%)
2000 - 6000	3 ( 6.3%)	2 ( 4.2%)	43 (89.6%)	48 (19.4%)
6000 +	0	0	21 (100.0%)	21 ( 8.5%)
No Response		50		
TOTAL	36 (14.5%)	46 (18.5%)	166 (66.9%)	248 (100.0%)



TABLE 3-39

## Law Enforcement Problems

Type of Impact	Respondents	
	Absolute Frequency	Relative Frequency(%)
None	283	56.3%
Minor	168	33.4
Additional manpower required	52	10.3
No Response	14	missing
TOTAL	503	100%



the people interviewed did not answer or said they didn't know. Respondents from small communities were more likely to anticipate minor law enforcement problems than those from large communities.

Of those respondents in the community survey who mentioned some law enforcement problem 29.2 percent said that nothing needed to be done, while 53.3 percent thought that additional law enforcement personnel should be added. Table 3-40 shows these results.

#### Water supply and sewerage

Only community level respondents were asked specifically about problems they anticipated with water supply and sewerage. As shown in Tables 3-41 and 3-42, 9.7 percent thought that a temporary work force would create problems of water supply and 14.7 percent thought it would pose difficulties for sewerage, either because facilities were inadequate, or no facilities existed. Over 76 percent said that they did not expect water to be affected at all and 73 percent said they did not expect sewerage to be affected at all.

#### Medical facilities

Since many of those interviewed were living in small, rural communities which had no, or extremely limited medical facilities, respondents expressed some difficulty in attempting to evaluate the effect of temporary workers on existing community medical facilities. When all 517 respondents were asked to identify what they thought might happen if a pipeline project took place, only 4 of the 825 responses addressed health or health care. Later in the questionnaire when a question specifically concerning medical facilities was asked, almost 11 percent of the 517 people interviewed gave no answer or said they didn't know. Of those responding, 70.1 percent said that the existing medical facilities would be adequate, although these statements were made with many qualifications. The remaining 29.9 percent said that the facilities were inadequate. When these people were pressed to offer a solution to the medical facility problem the typical response made by 67.9 percent of the 84 people responding was that workers would have to go to "neighboring" communities (which might be up to 50 miles distant from towns such as Saco or Winnett where there are virtually no health care facilities at all). No respondent suggested that the pipeline company or the construction contractor should



TABLE 3-40

## Law Enforcement Solutions\*

	Absolute Frequency	Relative Frequency(%)
Nothing needed	40	29.2
More personnel	73	53.3
Other	18	13.1
Don't know	6	4.4
No Response	161	-
TOTAL	137	100.0

\*Asked in community survey only.



TABLE 3-41

## Impact on Water\*

Type of Impact	Respondents	
	Absolute Frequency	Relative Frequency (%)
None	220	76.1%
Some	33	11.4
Facilities Inadequate	24	8.3
No Facilities	4	1.4
Don't Know	8	2.8
No Response	9	missing
TOTAL	289	100.0

\*Asked on community questionnaire only.

TABLE 3-42

## Impact on Sewer\*

	Respondents	
	Absolute Frequency	Relative Frequency (%)
None	199	72.9%
Some	33	12.1
Facilities Inadequate	30	11.0
No Facilities	10	3.7
Don't Know	1	0.4
No Response	25	missing
TOTAL	273	100.0

\*Asked on community questionnaire only.



provide health care for the workers. Tables 3-43 and 3-44 detail the responses obtained from this question.

#### Fire protection

A question concerning the anticipation of problems with fire protection in the county as a result of the pipeline project was asked of county level respondents. Of the 219 people interviewed, 177 (81.9 percent of those answering) said that they did not foresee any problems in fire protection. As shown in Table 3-45, the two problems identified were that the work load of the fire protection personnel would increase (14.8 percent) or that there would be a financial burden imposed on the county (0.9 percent). Eight of those questioned did not know or did not answer.

#### Commercial services

The respondents to the community survey were questioned regarding the adequacy of the local commercial and retail services to handle the additional demands of pipeline workers. Almost 85 percent indicated that these facilities were adequate in their community. Of the 15 percent (41 people) who said that the commercial facilities were inadequate, most said that workers could find such facilities in the nearest larger community. As shown in Tables 3-46 and 3-47, this was another town in the same county in 52.6 percent of the cases, and a town outside the county in 39.5 percent of the cases.

#### Summary

Overall, respondents anticipated few facility problems arising from a temporary influx of pipeline workers. Respondents in only the smallest communities were concerned about extra school children, and it is probable that very few additional school children would result from the proposed project in those communities. Less than half of the respondents anticipated law enforcement problems. The problems mentioned were principally of a minor nature, such as troublemaking or concerned additional manpower requirements. Generally, water, sewer, and health care facilities were viewed as adequate, and/or little affected by a pipeline project. Fire protection was expected to be minimally affected; only a few persons foresaw even minor problems. Commercial facilities were also deemed to be adequate, except in some of the smallest towns. Concerning other possible problems, 14 respondents (2.7 percent of the sample) were worried about possible damage to roads from pipeline construction activity.



TABLE 3-43

Opinions Regarding Adequacy of Medical Facilities  
to Deal with Pipeline Workers

Opinion	Absolute Frequency	Relative Frequency (%)
No Problem	323	70.1
Inadequate facilities	138	29.9
Don't Know or No Response	56	Missing
TOTAL	517	100.0

TABLE 3-44

Suggested Solutions to Inadequate  
Medical Care

	Absolute Frequency	Relative Frequency (%)
Go elsewhere	57	67.9
Improve facilities/ add personnel	14	16.7
Don't Know	13	15.5
No Response	54	Missing
TOTAL	138	100.0

TABLE 3-45

Fire Protection\*

	Absolute Frequency	Relative Frequency (%)
No problem	177	81.9
More work, other	32	14.8
Financial burden	2	0.9
Don't Know	5	2.3
No Response	3	Missing
TOTAL	219	100.0

\* This question was contained only on the county form.



TABLE 3-46

Adequacy of Commercial Facilities\*  
to Absorb Pipeline Workers' Trade

Opinion	Respondents	
	Absolute Frequency	Relative Frequency (%)
Adequate	253	84.9%
Inadequate	41	13.8
Don't Know	4	1.3
No Response	0	-
TOTAL	298	100%

\*Asked on community questionnaire only.

TABLE 3-47

Where Workers Might Trade\*

Location	Respondents	
	Absolute Frequency	Relative Frequency (%)
Other town in county	20	52.6%
Town outside county	15	39.5
Respondents' town	2	5.3
Don't know	1	2.6
No response	3	missing
Not applicable	257	-
TOTAL	41	100.0

\*Asked on community questionnaire only.



#### 3.2.4 Employment

Respondents to the community questionnaire were asked several questions regarding expectations for the employment of local people during the construction phase of a pipeline project. The first of these was whether the respondent felt that the pipeline would employ many local people, and whether this was good or bad for the community. The responses to this question are tabulated in Table 3-48. Of the 285 who responded to both questions, 67.7 percent felt that the pipeline project would employ many local people, while 31.2 percent felt it would not. Of those who expected much local employment, 98.4 percent felt that this was good and would be beneficial, while only 0.5 percent felt that a large local employment would be bad. However, of those who expected little local employment, 22.5 percent felt this was good, while the majority, 71.9 percent, felt it didn't matter, or that they didn't know. As seen in Table 3-49, 66.1 percent gave provision of jobs for the young and the reduction of employment as the reason for their evaluation of the "goodness" or "badness" of the expected amount of local employment. An additional 16.3 percent said that they based their evaluation on the premise that sufficient jobs were already available in the community.

Table 3-50 shows that when respondents were asked how many local people would apply for jobs on the pipeline, 69.3 percent said many (11 or more), while 30.7 percent indicated that 10 or fewer would apply. Opinion was almost evenly split on whether or not people would switch jobs to work on the pipeline with 47.4 percent responding yes, and 43.7 percent saying no; 4.8 percent said that it would depend on the wages. This is shown in Table 3-51. Of the possibility of only a few local workers being hired, 44.3 percent said it did not matter; 29.2 percent said it would still be beneficial if only a few were hired; and 25.1 percent said it would be bad if only a few local workers were hired. Table 3-52 illustrates this finding.

As shown in Tables 3-53 and 3-54, the respondents were then asked about the generation of other jobs in the community as a result of pipeline construction activities. Fifty-six percent of those responding mentioned more jobs in bars, restaurants, motels, or stores; and 13.9 percent thought there would be an increase in mechanical and non-pipeline construction jobs. However, 30.1 percent thought that no extra jobs would be created. Of those who thought jobs would be created, the vast majority (92.2%) said local people would fill the jobs; only one respondent said that outsiders would fill the jobs.



TABLE 3-48

## Estimate of Local Employment and Evaluation of Effect

	Effect			
	Good	Bad	Don't know	Total*
Employ many	190 (98.4%)	1 (0.5%)	2 (1.0%)	193 (67.7%)
Employ few	20 (22.5%)	5 (5.6%)	64 (71.9%)	89 (31.2%)
Don't know	0 (0.0%)	0 (0.0%)	3 (100%)	3 (1.1%)
TOTAL	210 (73.7%)	6 (2.2%)	69 (24.2%)	285 (100%)

\*Missing = 18

TABLE 3-49

## Reasons Why Employment Good, Bad, or Doesn't Matter

	Absolute Frequency	Relative Frequency (%)
Reduce unemployment/ jobs for young	162	66.1
Stimulate economy	16	6.5
Teach skills, other	7	2.8
No local people hired	20	8.2
Jobs already available	40	16.3
No Response	53	Missing
TOTAL	298	100.0



TABLE 3-50

Local Employment  
How Many Would Apply \*

Number	Absolute Frequency	Relative Frequency (%)
Few (0-10)	91	30.7
Many (11-25+)	206	69.3
No Response	1	Missing
TOTAL	298	100.0

\* Asked on community questionnaire only.

TABLE 3-51

Opinion Regarding Whether Local Workers  
Would Switch Jobs To Work On Pipeline

	Absolute Frequency	Relative Frequency
Yes	139	47.4
No	128	43.7
Don't Know	12	4.1
Depends upon pay	14	4.8
No Response	5	Missing
TOTAL	298	100.0

\* Asked on community questionnaire only.



TABLE 3-52

Reactions to Employment Opportunities  
If Only A Few Local Persons Hired \*

Reaction	Absolute Frequency	Relative Frequency (%)
Good	64	29.2
Bad	55	25.1
Doesn't Matter	97	44.3
Other	3	1.4
Not Asked, No Response	79	Missing
TOTAL	298	100.0

\* Question asked on community questionnaire only.

TABLE 3-53

Secondary Jobs Created By Pipeline

Types of Jobs	Absolute Frequency	Relative Frequency (%)
No	87	30.1
Retail Service (Bar, Restaurant, Motel, Stores)	162	56.1
Mechanical, Construction and Others	40	13.9
Not Asked, No Response	9	Missing
TOTAL	298	100.0



TABLE 3-54

Opinions Regarding Whether Local People  
Would Fill Secondary Jobs \*

Opinion	Absolute Frequency	Relative Frequency (%)
Yes	201	92.7
No	4	1.9
Don't Know	11	5.1
Outisders will fill jobs	1	0.5
Not Asked, No Response	81	Missing
TOTAL	298	100.0

\* Asked only in community questionnaire.



To summarize and clarify the findings concerning opinions on employment impacts at the community level, most respondents felt the pipeline would provide jobs for many young and unemployed local people. Many respondents recognized that pipeline work requires a large proportion of skilled labor and would not be too disappointed if few local people were hired, but were hopeful that the pipeline would hire local people whenever possible. Some respondents expressed the opinion that the pipeline company has a responsibility to hire local people, since pipeline workers would be using local facilities. Most respondents felt that local businesses would have to hire additional staff or use more overtime, and that the local labor force would probably fill these jobs.

### 3.2.5 Land Use

#### General

Several questions dealt with impacts on land use, right-of-way acquisition and possible long-term effects on land and related factors. Detrimental short-term effects on land due to the construction process were seldom mentioned. Two or three respondents mentioned that a field with a growing crop should not be torn up and a few mentioned that workers should be careful to close gates and leave fences up so livestock would not wander. Six respondents thought that there might be some problems with access roads.

Respondents were questioned concerning the pipeline right-of-way. When asked if they expected problems with the right-of-way, 49.8 percent of those responding thought that there would be no problem; 26.5 percent thought that owners might raise objections to the project; and 24.6 percent thought there might be other problems such as terrain, land productivity erosion, or other unspecified difficulties. Forty-two respondents didn't know or did not answer. The distribution of these results is shown in Table 3-55.

The respondents were then asked what might be done to minimize right-of-way problems. Of the 465 people who answered, 45.5 percent suggested the use of education, meetings, and good public relations. An additional 22.4 percent said that adequate payments to landowners would minimize the problems. While 12.7 percent suggested proper construction procedures and thorough reclamation efforts, 12.2 percent suggested a change of route, and 7.3 percent said that



TABLE 3-55

## Right-Of-Way Problems

Opinion	Absolute Frequency	Relative Frequency (%)
No	232	48.8
Yes, Owners	126	26.5
Yes, Misc.	117	24.6
No Response, Don't Know	42	Missing
TOTAL	517	100.0



nothing could be done to solve the problems. This breakdown appears in Table 3-56.

As shown in Tables 3-57 and 3-58, although the occupation of the respondent appears to have little effect on their identification of right-of-way problems it does appear to affect the recommended mitigation procedure. As indicated above, the provision of good public information and public relations was the most frequent response of the group as a whole. However, this response was less likely for agriculturalists than for professionals/managers (38.9 percent vs. 52.2 percent respectively).

Agriculturalists were also less likely to cite proper construction and reclamation practices (9.7 percent vs. 17.4 percent), but were more likely to cite adequate payment (30.6 percent vs. 13.0 percent) and alteration of the route (12.5 percent vs. 8.7 percent) than were professionals/managers. Table 3-59 shows that respondents were almost equally divided on whether or not the pipeline right-of-way should avoid particular types of land uses. Almost half (48.2 percent) said that there were no particular land use types to avoid, while the other half said that certain types should be avoided. About 20 percent identified productive/agricultural land as the only land use necessary to avoid, while 14.3 percent and 6.4 percent identified only scenic/environmental and developed/urban, respectively. An additional 8.3 percent said that both productive/agricultural and scenic/environmental land should be avoided. Altogether, 29.2 percent mentioned productive/agricultural land (alone or in combination); 24.1 percent mentioned scenic/environmental; and only 8.7 percent mentioned developed/urban land as necessary to avoid.

According to 87.2 percent of the respondents, the predominant land use in their area (usually farming and ranching) was not expected to be affected by the presence of a pipeline. The 10.7 percent who felt that the pipeline would affect the predominant local land use gave a variety of answers. A number did not identify a particular effect (3.1 percent), while some cited land use disturbances resulting from pipeline inspections (3.3 percent), and some (2.1 percent) mentioned environmental harm. Table 3-60 shows this breakdown.



Table 3-56

Mitigation Measures Identified by Respondents  
To Solve Right-Of-Way Problems

Type of Measure	Respondents	
	Absolute Frequency	Relative Frequency (%)
Change Route	25	12.2%
Pay Compensation	46	22.4
Careful Construction & Reclamation	26	12.7
Public Relations/Education	93	45.4
Nothing Can Be Done	15	7.3
No Response	312	-
TOTAL	205	100.0

TABLE 3-57

Expectation of Problems with Right-of-Way As A  
Function of Respondent's Occupation

Occupation	Type of Problem			Total
	None	Land Owner	Misc. Problems	
Professional/Managerial	73 (46.8%)	42 (26.9%)	41 (26.3%)	156 (33.5%)
Service/Clerical/Misc.	91 (52.3%)	42 (24.1%)	41 (23.6%)	174 (37.4%)
Agricultural/Forestry	63 (46.7%)	40 (29.6%)	32 (23.7%)	135 (29.0%)
No Response	52			
TOTAL	227 (48.8%)	124 (26.7%)	114 (24.5%)	465 (100%)



TABLE 3-58

Mitigation Measures Identified by Respondents To Solve  
Right-Of-Way Problems As A Function of Occupation

Occupation	Type of Measure					Total
	Change Route	Pay Compensation	Careful Constr. & Reclamation	Public Relations and Education	None Possible	
Professional/Managerial	6 ( 8.7%)	9 (13.0%)	12 (17.4%)	36 (52.2%)	6 ( 8.7%)	69 (34.2%)
Service/Clerical/Misc.	9 (14.8%)	15 (24.6%)	5 ( 8.2%)	29 (47.5%)	3 ( 4.9%)	61 (30.2%)
Agriculture/Forestry	9 (12.5%)	22 (30.6%)	7 ( 9.7%)	28 (38.9%)	6 ( 8.3%)	72 (35.6%)
No Response	315					
TOTAL	24 (11.9%)	46 (22.8%)	24 (11.9%)	93 (46.0%)	15 ( 7.4%)	202 (100%)

TABLE 3-59

Recommended Land Uses to Avoid

Opinion	Absolute Frequency	% Relative Frequency
None to Avoid	249	48.2
Productive/Agricultural Only	104	20.1
Scenic/Environmental Only	74	14.3
Developed/Urban Only	33	6.4
Productive & Scenic	43	8.3
Productive & developed	4	0.8
Scenic & Developed	8	1.5
Don't Know/No Opinion	2	0.4
TOTAL	517	100.0



TABLE 3-60

Respondents' Expectations of Pipeline Impacts  
on Predominant Land Use in Local Area

Opinion	Absolute Frequency	Relative Frequency (%)
No Impact	451	87.2
Some Impact	55	10.7
General	16	3.1
Affects topsoil	7	1.4
Must clear ROW	4	0.8
Use interruptions by inspections	17	3.3
Harm environment/ecology	11	2.1
Don't Know	11	2.1
TOTAL	517	100.0



## Subgroup differences

### Land to avoid

There was some difference in the response patterns to questions concerning land use impact among different groups of respondents. When respondents were grouped according to their proximity to a proposed route, some differences emerged. Those in the Hi-Line corridor were least likely to indicate that a land use type required special avoidance than the others. Those in the Preferred and Interstate corridors were least likely to say that no land use required avoidance. A larger proportion of those in the Preferred and Interstate corridors recommended avoidance of agricultural/productive land than did those in the other corridors, although the percentage recommending such avoidance was only 32.3 and 29.5 respectively. These results are shown in Tables 3-61 and 3-62.

When the 517 respondents were divided into two groups - east and west - according to their location in the state, some significantly different patterns in the answers to land use avoidance emerged.<sup>1</sup> As shown in Table 3-63, over 53 percent of the east group said that there was no particular type of land use which needed to be avoided by the pipeline ROW. A much lower percentage, only 32 percent, of those in the west group shared this opinion. Reflecting this greater protectiveness of land use, those in the west were more likely than those in the east to specify avoidance of scenic/environmental land (34.4 percent vs. 20.7 percent) and developed/urban land (16.0 percent vs. 6.3 percent) and developed/urban land (16.0 percent vs. 6.3 percent). However, there was little difference in opinion between the two groups with regard to productive/agricultural land. Twenty-eight percent of those in the west and 29.6 percent of those in the east considered productive/agricultural land a type of land use necessary to avoid.<sup>2</sup>

Consideration of several other arrangements of the respondents shown in Table 3-63 provides some insight into the structure of the land use avoidance response pattern. One alternative grouping, comparing the community with the county level

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<sup>1</sup>Since there were three times as many people interviewed from the eastern part of the state than from the western - 320 vs. 125 - (see Appendix for a definition of the east-west boundaries), the eastern respondents influence the average figures presented earlier. For this reason as well as the interest in geographical differences, it is interesting to consider the differences in response.

<sup>2</sup>These figures total more than 100 percent since respondents were allowed to identify more than one land use type requiring avoidance.



TABLE 3-61

Respondents Indicating No Land Use Types To Be Avoided by  
Pipeline Corridor As A Connection of Corridor

Corridor	None To Avoid		Avoid		Total
	Absolute Frequency	Relative Frequency (%)	Absolute Frequency	Relative Frequency (%)	
Preferred	69	44.5%	86	55.5%	155
Hi-Line	66	62.3	40	37.7	106
Lewistown Cutoff	19	55.9	15	44.1	34
Interstate	57	44.2	72	55.8	129
Combined	38	53.5	33	46.5	71
No Response	22				
TOTAL	249	50.3%	246	49.7%	495

TABLE 3-62

Respondents' Attitudes Regarding Avoidance of  
Agricultural Land As A Function of Corridor

Corridor	Should Avoid		No Mention		Total
	Absolute Frequency	Relative Frequency (%)	Absolute Frequency	Relative Frequency (%)	
Preferred	50	32.3%	105	67.7%	155
Hi-Line	22	20.8	84	79.2	106
Lewistown Cutoff	6	17.6	28	82.4	34
Interstate	38	29.5	91	70.5	129
Combined	15	21.1	56	78.9	71
No Response	22				
TOTAL	131	26.5%	364	73.5%	495



TABLE 3-63

Land Uses to Avoid: For Different Groupings of the Respondents

Opinion	East vs. West			Randomly Selected vs. Spokes- vs. Others				Community All Others				Environmental Groups vs. Others				Total Sample	
	Abs.	%	Abs.	%	Abs.	%	Abs.	%	Abs.	%	Abs.	%	Abs.	%	Abs.	%	
None to Avoid	209	53.3	40	32.0	63	64.3	27	40.3	159	45.2	6	21.4	159	48.9	249	48.2	
Productive/Agriculture Only	80	20.4	24	19.2	13	13.3	18	26.9	73	20.7	5	17.9	60	18.5	104	20.1	
Scenic/Environmental Only	44	11.2	30	24.0	13	13.3	9	13.4	52	14.8	7	25.0	46	14.2	74	14.3	
Developed/Urban Only	19	4.8	14	11.2	3	3.1	6	9.0	24	6.8	5	17.9	23	7.1	33	6.4	
Productive & Scenic	34	8.7	9	7.2	6	6.1	4	6.0	33	9.4	4	14.3	26	8.0	43	8.3	
Productive & Developed	2	0.5	2	1.6	0	0.0	1	1.5	3	0.9	0	0.0	3	0.9	4	0.8	
Scenic & Developed	4	1.0	4	3.2	0	0.0	2	3.0	6	1.7	1	3.6	6	1.8	8	1.5	
Don't Know/ No Opinion	-	-	2	1.6	0	0.0	0	0.0	2	0.6	0	0.0	2	0.6	2	0.4	
GROUP TOTALS	392	100.0	125	100.0	98	100	67	100	352	100	352	100	28	100	325	100	
Percent of Entire Sample		75.8		24.2		19.0		13.0		68.1		(7.9) 5.4		(92.1) 62.9		100	



respondents, shows almost no difference in response pattern. When the respondents are sorted into three groups: randomly selected citizens, community spokespersons, and all others, some differences do emerge. Over 64 percent of the randomly chosen citizens said that there were no types of land use which required avoidance; 40.3 percent of the community spokespersons and 45.3 percent of all others voiced this opinion. The other large difference in opinion among these three groups was over the need to avoid productive/agricultural. Only 19.3 percent of the randomly selected citizens included this land use among those requiring avoidance, compared to almost 33 percent of the community spokespersons and 30 percent of all the others.

When the respondents were separated into two groups - those who identified themselves as members of an environmental group or association, and all others, some similar comparisons were made. Interestingly, 21.4 percent of the members of environmental groups felt that it was not necessary to avoid any particular land use type. Although this is less than half the percentage of all others giving this response (48.9), it is a substantial proportion. As expected, a higher percentage of those who were members of an environmental group (almost 43 percent) included scenic/environmental land for avoidance than did the others (24 percent), while 32.2 percent of the environmental group members and 27.4 percent of all others included productive/agricultural land among the types necessary to avoid.

When the respondents were grouped according to their occupation, no significant differences were observed in the response pattern. As shown in Table 3-64, the avoidance of productive/agricultural land was mentioned no more frequently by farmers and others involved in agriculture and forestry than by professionals/managers or service and clerical personnel.

#### Effect on predominant land use in the area

When responses to the question concerning anticipated effect of the pipeline on the predominant local land use are examined by corridor, few differences are found. Respondents in all five alternatives considered indicated that little impact was expected. Those in the Preferred corridor were somewhat less likely than others to say that no impact was expected (80.9 percent compared to the



TABLE 3-64

Respondents' Attitudes Regarding Avoidance of  
Agricultural Land As A Function of Occupation

Occupation	Should Avoid		No Mention		TOTAL
	Absolute Frequency	Relative Frequency (%)	Absolute Frequency	Relative Frequency (%)	
Professional/ Managerial	45	28.0%	116	72.0%	161
Service/Clerical/ Misc.	40	21.5	146	78.5	186
Agriculture/Forestry	43	31.4	94	68.6	137
No Response	33				
TOTAL	128	26.4%	356	73.6%	484



average of 86.8 percent). Few specific areas of impact were noted with sufficient frequency to make valid comparisons. None were mentioned by as many as 5 percent of the respondents.

Greater differences are observed in comparing the responses of those in the east of the state to those in the west. Over 89 percent of those in the east expected no impact compared to 80.8 percent in the west. A greater proportion of those in the east felt the pipeline would interrupt land use than did those in the west, and 5.6 percent of the respondents in the west felt that the pipeline would harm the ecology compared to only 1 percent of those in the east. The numbers are rather small, however, and should be interpreted with caution. These results are also shown in Table 3-65.

When the randomly chosen citizens and community spokespersons are compared with all others as in Table 3-65, few differences in expectation of land use impact are evident. Community spokespersons are most likely of these three groups to expect no impact, (94.0 percent) followed by all others (87.5 percent) and randomly chosen citizens (81.6 percent). Randomly selected citizens mentioned interruption of land use slightly more frequently than did the others.

More distinctive differences emerge in the comparison between members of environmental groups with all others. As expected, members of environmental groups were considerably less likely to say that the pipeline would have no effect on the predominant local land use. Nevertheless, 71.4 percent of those belonging to environmental groups said no impact was anticipated. This compares to 88.9 percent of all others and 87.2 percent of the sample as a whole.

Members of environmental groups were more likely to expect general impacts (10.7 percent vs. 2.8 percent) to expect interruption of land use (7.1 percent vs. 2.5 percent) and to expect harm to the ecology (10.7 percent vs. 2.2 percent). Again, however, the numbers involved are small, only 28 members of environmental groups were identified who responded to these questions.<sup>1</sup> Table 3-65 shows the breakdown of responses for these groups.

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<sup>1</sup>This categorization does not necessarily include those people chosen for inclusion as environmentalists/preservationists. They are included in this group only if they also belong to an environmental group.



TABLE 3-65

## Effect on Predominant Land Use

	East vs. West		Randomly Selected vs. Spokes- vs. Others				Environmental Groups vs. Members		All Others		Total Sample
	#	%	4	2	3	10	3	9	2.8	16	
Expect Impact General	9	2.3	7	5.6							
No Impact	350	89.3	101	80.8							
Top Soil	6	1.5	1	0.8							
Clear ROW	1	0.3	3	2.4							
Interrupt Land Use	15	3.8	2	1.6							
Harm Ecology	4	1.0	7	5.6							
Don't Know	7	1.8	4	3.2							
TOTAL	392	100	125	100							
Percent of Sample											



As can be seen from Table 3-65, despite some differences among groups, the overall responses of the sample concerning land use avoidance and anticipated effects on land use by the pipeline are surprisingly consistent.

#### Summary

In general, very few respondents anticipated short-term adverse impacts on land or land use as a result of the proposed pipeline. Just over half the respondents thought there might be problems with the right-of-way, especially with landowners. The usual remedy suggested for such problems was good public relations and public education, although farmers were more likely than others to stress the need for adequate financial remuneration. About half of the respondents also felt that there were no types of land or land use which should be avoided by the pipeline right-of-way. Somewhat over a quarter of the respondents felt that productive/agricultural land should be avoided. Surprisingly, farmers did not respond significantly differently than others on this question. Only a small proportion of the respondents anticipated much effect on the predominant land use of their area. Only a very few expected harm to the soil or the ecology as a result of the pipeline.



### 3.2.6 Fiscal and Other Long-Term Effects

#### Fiscal effects

The proposed pipeline was generally not perceived by the respondents as having any major effect on taxes. More than one-third of the respondents (37.3 percent) thought that taxes would not be affected by the pipeline. Over 45 percent thought that the pipeline would generate added tax revenues to their community or county, but only about one-third of these (13.3 percent overall) anticipated a reduction in their taxes as a result. As shown in Table 3-66, only 5.3 percent felt their taxes would be raised because of the pipeline and 12.0 percent didn't know whether or what effect on taxes a pipeline would have.

#### Other effects

Tables 3-67 and 3-68 show the opinions voiced by the respondents concerning long-term effects of the pipeline. When asked to identify the long-term beneficial effects they anticipated from a pipeline built in their area, 37.7 percent of the respondents listed economic factors, particularly increases in the tax base and local employment. Associated with the increased employment was an increase in population. Energy considerations, particularly a readily available fuel supply for agriculture and a source of fuelstock for the state's oil refineries, was mentioned by 34.2 percent. Almost one quarter (23.8 percent) said there would be no long-term beneficial effects, and 4.3 percent had no opinion or didn't know what beneficial effects might accrue.

Conversely, when asked to identify anticipated adverse long-term effects, 59.4 percent of the respondents said there would be none. However, 21.6 percent of those interviewed anticipated oil leaks or pipeline breaks; 9.9 percent mentioned other environmental or ecological damage; and 5.6 percent mentioned economic problems, with particular concern for boom-and-bust cycles.

#### Summary

With regard to fiscal and other long-term effects expected to result from the proposed pipeline a greater proportion were identified by the respondents as beneficial than detrimental. The pipeline was generally expected to have a beneficial effect on taxes, either through increased tax revenues or decreased tax rates. Similarly, when respondents were asked to cite both beneficial and



TABLE 3-66

## Opinions Regarding Pipeline Impact on Taxes

Type of Impact	Respondents	
	Absolute Frequency	Relative Frequency (%)
None	190	37.3%
Lower Taxes	68	13.3
Raise Taxes	27	5.3
Increase Revenues	164	32.2
Don't Know	61	12.0
No Response	7	-
TOTAL	510	100.0

TABLE 3-67

## Beneficial Long-Term Effects

	Absolute Frequency	Relative Frequency (%)
None	123	23.8
Economic	195	37.7
Energy	177	34.2
Don't Know, No Response	22	4.3
TOTAL	517	100.0



TABLE 3-68

## Adverse Long-Term Effects

	Absolute Frequency	Relative Frequency (%)
None	307	59.4%
Possible Leakage	112	21.6
Other Environmental/ Ecological	51	9.9
Economic & Misc.	29	5.6
Don't Know, No Response	18	3.5
TOTAL	517	100.0



adverse long-term effects, more than twice as many beneficial effects were mentioned than adverse effects. Increased tax revenues and the availability of fuel were the benefits most frequently anticipated. The most commonly anticipated adverse effect was oil leakage, although this was mentioned by only about one-fifth of the respondents.



### 3.3 Overall Attitudes Regarding The Northern Tier Project

#### 3.3.1 General

At the conclusion of the interview, respondents were asked to summarize their opinions toward the proposed pipeline project and to explain why they made that evaluation. Specifically, respondents were asked if, after considering all factors, they considered the construction of the pipeline in their area as good, bad or neutral/inconsequential. Of the 516 who responded to this question, the great majority (71.3 percent) said they felt the project would be good for the area. Only 6.8 percent felt the pipeline was bad, while 18.6 percent said that they thought it was neutral or that it didn't matter. Just over 3 percent said that the proposed project was both good and bad. These results are tabulated in Table 3-69. Respondents were requested to explain the most important reasons for their overall evaluation of the pipeline project. They were encouraged to give multiple reasons if necessary to account for their overall opinion. The responses are shown in Table 3-70. Seventy-one of the 517 gave no answer or said they didn't know. An additional 46 (10.3 percent of those responding) said that the pipeline would have no effect at all, and consequently did not cite any reasons. Perceived benefits - economic, energy, or general - were given as the main bases for evaluation by 366 respondents (82.1 percent of those responding). Economic benefits were the most commonly given reason (55.8 percent of all responding) followed by energy benefits (19.1 percent) and unspecified, general benefits (7.2 percent).

Adverse effects upon the land, energy and economy were given as the main reason for evaluation by 7.6 percent of those responding. Considering all of the reasons given by respondents, (741 plus 21 don't know) it is clear that of the vast majority of the specific reasons that influenced the respondents' overall attitude toward the pipeline were positive. Of the 762 responses given, 579 were positive, while 52 were negative, and 110 were specifically neutral or were given without an evaluative indicator.

The respondents were asked to make a final comment and to identify any possible impacts not already discussed which they felt ought to be considered in evaluating the effects of the pipeline. The response to this request is shown in Table 3-71. Most of the final comments were reiterations of earlier responses. Since the survey questionnaire was rather comprehensive and allowed respondents to voice their own answers rather than to choose from a previously formulated



TABLE 3-69

## Overall Opinion Toward The Proposed Pipeline

Opinion	Respondents	
	Absolute Frequency	Relative Frequency (%)
Good	368	71.3%
Bad	35	6.8
Doesn't Matter	96	18.6
Good & Bad	16	3.1
Wait & See	1	0.2
No Response	1	-
TOTAL	516	100.0

TABLE 3-70

## Reasons for Overall Attitude

	Absolute Frequency	Relative Frequency (%)
No Effect	46	10.3%
Economic Benefit	249	55.8
Energy Benefit	85	19.1
General Benefit	32	7.2
Land, Energy, Economy Adverse	34	7.6
No Response or Don't Know	71	missing
TOTAL	517	100.0



TABLE 3-71

## Additional Comments

Comment	Absolute Frequency	Relative Frequency (%)
Nothing More	348	71.6%
Land and Other Cautions	77	15.9
Facilities & Other Adverse	37	7.6
Economic & Other Benefits	24	4.9
No Response	31	missing
TOTAL	517	100.0



list, many respondents said they had nothing more to add (71.6 percent). However, a number of respondents (15.9 percent) did express additional words of caution concerning the pipeline and its effects. These comments focused on detrimental impacts upon land and facilities such as local roads. Several (4.6 percent) re-emphasized the beneficial economic and energy effects discussed previously. In addition, this final question did elicit some previously unmentioned cautions, advice and observations. Among these were recommendations that local unions should be consulted, that attention be paid to the location of buried missile cables, that the impact of the pipeline on coal and on electrical utilities should be examined, that historical sites should be avoided, and that DNRC should have siting and shutdown authority.

#### Sub-group comparisons

The overall opinions and supporting reasons for evaluation of the pipeline was compared among the different groups of respondents.

When the respondents were grouped according to corridors, as shown in Table 3-72, some differences in overall opinion can be detected. An overall favorable opinion was given most frequently (81.3 percent) by those in the Hi-Line corridor, and least frequently by those in the Interstate corridor (64.9 percent). A substantial and fairly even proportion of respondents in all corridors said that the pipeline "doesn't matter" from the point of view of the county or community. Consequently, the "good" and "bad" patterns are closely related, for example the Hi-Line had the greatest proportion of "good" responses and the lowest proportion of "bad" responses, while the Interstate was just the reverse. Overall, however, it is important to remember that 71.3 percent of all respondents evaluated the pipeline favorably, 18.6 percent said it would have little effect and 6.8 percent evaluated it negatively.

In the overall evaluation of the pipeline, there were some significant differences between the county and community respondents. As shown in Table 3-73, county respondents were less likely to evaluate the pipeline favorably and more likely to evaluate it negatively than the community respondents (68.0 percent vs. 73.7 percent "good", 10.5 percent vs. 4.0 percent "bad"). County respondents less frequently than community respondents said the pipeline "didn't matter" (15.5 percent vs. 20.9 percent) and more frequently said that it had both good and bad



TABLE 3-72

Overall Opinion Toward the Proposed Pipeline  
As A Function of Corridor

Corridor	Opinion					TOTAL
	Good	Bad	Doesn't Matter	Good & Bad	Wait & See	
Preferred	109 (67.7%)	14 (8.7%)	32 (19.9%)	6 (3.7%)	0	161 (31.2%)
Hi-Line	91 (81.3%)	1 (0.9%)	18 (16.1%)	2 (1.8%)	0	112 (21.7%)
Lewistown Cut.	27 (75.0%)	2 (5.6%)	7 (19.4%)	0	0	36 (7.0%)
Interstate	87 (64.9%)	13 (9.7%)	28 (20.9%)	6 (4.5%)	0	134 (26.0%)
Combined*	54 (74.0%)	5 (6.8%)	11 (15.1%)	2 (2.7%)	1 (1.4%)	73 (14.1%)
No Response			1			
TOTAL	368 (71.3%)	35 (6.8%)	96 (18.6%)	16 (3.1%)	1 (0.2%)	516 (100%)

\*Responses from counties affected by more than one corridor alternative.



aspects (5.5 percent vs. 1.3 percent). Only one respondent, from the community level, did not answer this question.

Some even greater differences in overall opinion emerge when respondents are grouped according to their location in the eastern or western part of the state. Those respondents from the western part of Montana were significantly less likely to have a favorable opinion of the pipeline than those from the eastern part (54.8 percent vs. 76.5 percent). They more frequently had an unfavorable opinion (16.1 percent vs. 3.8 percent) and more frequently felt the pipeline "doesn't matter" (23.4 percent vs. 17.1 percent), as shown in Table 3-73. No large differences in overall opinion were shown when respondents were grouped according to community size.

No substantial differences were noted among the overall opinions of randomly selected citizens, community spokespersons and all others. However, when members of environmental groups were compared with all others on this response, clear differences are seen.

As shown in Table 3-73, members of environmental groups were less likely than all others to feel the pipeline was "good" (46.4 percent vs. 76.0 percent) and more likely to feel it was "bad" (28.6 percent vs. 6.5 percent). Somewhat surprisingly, members of environmental groups were also more likely to say that the pipeline didn't matter than all the others (21.4 percent vs. 13.8 percent).

### 3.3.2 Summary

Throughout the questionnaire, respondents showed an awareness of potential benefits and adverse effects of the proposed pipeline. Their summary evaluation is consistent with the responses made in other portions of the questionnaire. When asked to take everything into consideration and formulate their overall attitude toward the pipeline, a large majority of those interviewed (71.3 percent) gave unequivocally positive evaluations. A substantial percentage said that, all things considered, the pipeline did not matter (18.6 percent). Only a small minority (6.8 percent) felt that the pipeline was detrimental in overall effect. Relatively few respondents wished to raise impacts for consideration which had not been covered in the questionnaire. A number of those interviewed did stress again their concerns over potentially adverse impacts on their area such as community facilities and especially land and land use.



TABLE 3-73

Overall Opinion of the Proposed Pipeline  
Comparison Among Various Groupings

OPINION	County vs. Community		East vs. West		Environmental Groups vs. All Others Members		Total Sample	
GOOD	# 149	% 68.0	219 73.7	300 76.5	68 54.8	13 46.4	247 76.0	368 71.3
BAD	# 23	% 10.5	12 4.0	15 3.8	20 16.1	8 28.6	21 6.5	35 6.8
DOESN'T MATTER	# 34	% 15.5	62 20.9	67 17.1	29 23.4	6 21.4	45 13.8	96 18.6
BOTH GOOD AND BAD	# 12	% 5.5	4 1.3	10 2.6	6 4.8	1 3.6	11 3.4	16 3.1
WAIT AND SEE	# 1	% 0.5	0 0.0	0 0.0	1 0.8	0 0.0	1 0.3	1 0.2
TOTAL	# 219	% 100.0	297 100.0	392 100.0	124 100.0	28 100.0	325 100.0	516 100.0
PERCENT OF SAMPLE	42.4		57.6	76.0	24.0	7.9	92.1	



#### 4. INTERPRETATION OF RESULTS

This section of the PAAP Final Report identifies the major themes that emerge from the community and county surveys and then briefly examines possible implications of those themes for the DNRC assessment of the proposed pipeline project as well as for its eventual construction, should all necessary permits to proceed be granted. While reviewing the overall results and implications of the Public Attitude Assessment Program, it should be borne in mind that only socioeconomic and land use issues were addressed in the survey. Public attitudes toward possible project impacts on the physical environment were not surveyed.

##### 4.1 General Themes

A number of general themes emerge concerning attitudes toward the pipeline on the part of key respondents and randomly selected citizens along the alternative corridors - groups potentially most affected by the project. Predominant among these themes, and one which began to surface early in the survey, was overall approval of the proposed project. A large majority of the respondents (71 percent) opposed it. A substantial number (18.6 percent) felt that the pipeline was of little consequence to their locale. Because the survey sample included many community and county leaders who were active in local government, and employed as professionals or business managers, one might anticipate some pro-pipeline bias. However, the remaining occupational categories were also, on the whole, favorably disposed toward the pipeline (see Table 4-1).

A second general theme that can be readily identified from the survey results is that respondents were, for the most part, not very concerned about large groups of pipeliners temporarily resident in their communities. There was little expectation of major socioeconomic disruption. In part, this attitude may be attributed to most respondents' previous experience with temporary work forces of varying sizes. Depending on community size, there is more than a grain of truth in this expectation, as demonstrated by the findings of Mountain West in its previous surveys of communities in which pipeline work forces have been resident.<sup>1</sup> Moreover, residents of the smallest

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<sup>1</sup>See Pipeline Construction Worker and Community Impact Surveys: Final Report, prepared by Mountain West Research, Inc., for the Northern Tier Pipeline Company, Billings, 1979. Post impact surveys of seven towns ranging in size from 2,000 to 8,000 identified little socioeconomic effect from pipeline projects.



TABLE 4-1

Overall Opinion of Proposed Pipeline As A  
Function of Occupation

Occupation	Overall Opinion					Total
	Good	Bad	Doesn't Matter	Good & Bad	Wait & See	
Professional/ Managerial	125 (74.0%)	11 ( 6.5%)	28 (16.6%)	4 ( 2.4%)	1 ( 0.6%)	169 (33.5%)
Service/ Clerical/Misc.	143 (73.3%)	8 ( 4.1%)	38 (19.5%)	6 ( 3.1%)	0	195 (38.7%)
Agriculture/ Forestry	93 (66.4%)	15 (10.7%)	26 (18.6%)	6 ( 4.3%)	0	140 (27.8%)
No Response	13					
TOTAL	361 (71.6%)	34 ( 6.7%)	92 (18.3%)	16 ( 3.2%)	1 ( 0.2%)	504 (100%)



towns (those communities most vulnerable to significant socioeconomic impact from the project) were realistic in their expectation that only limited numbers of workers would ultimately reside in their locale. Reasoning that adequate accommodations and services were not available, the vast majority of workers would not choose to live there. An important exception might occur in the case of a construction camp near a smaller community. In this case, bars and restaurants in the community would probably experience overcrowding due to the pipeliners' presence - particularly in the evenings and on Sundays.

Against the general anticipation of little socioeconomic impact, except of a positive economic nature, it should be noted that some respondents expressed the opinion that strain on existing facilities could occur, especially in the smaller communities. Although the majority felt that schools generally could handle the increased enrollments, medical services would see little adverse effect and only minor law enforcement problems were anticipated. In a few cases, respondents felt that additional demands on water and sewer systems might cause problems, particularly in the summer.

A third general theme woven throughout the survey results is the expectation by respondents of positive economic benefits from the Northern Tier Pipeline project. During the construction phase, such benefits were anticipated in the form of employment opportunities for local residents and increased income resulting from the local expenditures of the project and workers during the construction phase. The large majority of respondents believed that local people would seek pipeline jobs and would find them. Respondents generally felt that such employment would be good even if only a few local people were hired. Respondents also felt that the pipeline project would induce other jobs in the community and that local residents would fill these jobs.

Over the long term, many respondents cited the positive economic benefits that the pipeline would produce in terms of assured fuel supplies for farmers/ranchers and feedstock for Montana's oil refineries. Moreover, many respondents also correctly anticipated that the pipeline would bring additional revenues to the taxing jurisdictions through which the alignment passes.



Surprisingly, land and land use impacts did not emerge as a strong concern of respondents. Although a few anticipated the possibility of significant adverse effects, about half expected no problems at all. Respondents were particularly unconcerned about impacts during the construction period; however, a number did mention possible problems with right-of-way acquisition - problems that they felt could largely be overcome by policies of fair compensation and good public relations. The latter point is consistent with the finding of Mountain West in communities which have experienced pipeline construction impact. Generally, the more sensitive the contractor is to local concerns and the more careful he is to anticipate and plan for problems such as those of right-of-way acquisition, the more smoothly relations between the project and the local community will evolve. The chief concern mentioned by respondents for land use impacts during the operational phase of the pipeline was the possibility of oil spills.

A final theme, identifiable in the survey results, concerns lodging. Respondents in most communities with a population greater than 1,000 thought that there would be adequate space in motels, hotels, trailer parks and rental housing to accommodate the influx of pipeline workers. If not, it was suggested that workers could bring in trailers, and places to park them could be found. However, pipeline workers will be competing for housing with other transients, particularly during the summer tourist season, which may create greater congestion than anticipated.

In towns of less than 1,000, the general response was that it would be difficult to house a large number of workers. However, respondents in these communities also felt that they could and should have the opportunity to house some of the workers. It is interesting to note that somewhat more than half of the respondents (56.8%) were opposed to special construction camps being used for the workers.

#### 4.2 Implications for Environmental Assessment and Pipeline Construction

##### 4.2.1 Implications for Environmental Assessment

The PAAP survey results have several important implications for DNRC's environmental assessment process.

- 1) The results indicate a surprisingly high awareness of the NTP project and support for it among persons potentially most affected by its construction. Moreover, the level of positive



attitude toward the project differs little from one corridor alternative to another.

- 2) Although adverse impacts on land use was a problem anticipated by a minority of respondents, the necessity to avoid productive land, if possible, was the primary message of those concerned about this type of impact.
- 3) Very few respondents singled out competition for transient lodging during the summer as a potential problem.

The first point essentially says that most people along the potential NTP corridors have heard of the project and either endorse it or do not think that its impact matters. Clearly, an extensive round of DNRC-sponsored informational meetings on Northern Tier is not required given present levels of awareness, unless important new information comes to light that requires dissemination and public evaluation or reaction.

Point number two, above, indicates public concern and support for avoidance of productive land in locating the centerline of the system - when nonproductive or less productive alignment options are available.

Point number three implies that, in the minds of survey respondents, the potential competition for motel rooms between pipeline workers and summer tourists does not deserve the importance that it is given in the socioeconomic impact assessment component. At least, this would be the case if it were possible to systematically take account of public attitudes when assigning relative importance to the various impact categories that comprise the assessment process.

#### 4.2.2 Implications for Mitigation Measures

Because respondents generally foresaw few socioeconomic impact problems resulting from NTP construction, suggestions regarding possible impact mitigation measures were very limited. Such measures can be summarized under "lodging," "land use," and "other" headings:



- 1) Lodging. The majority of respondents favored the lodging of workers in communities rather than in construction camps. In addition, few thought that significant numbers of rooms in private homes were likely to be made available to workers. The use of travel trailers was mentioned by some respondents as a means of accommodating excess demand for transient lodging facilities.
- 2) Land Use. Good construction methods and careful reclamation (clean-up following construction) practices were suggested by several respondents as a means of limiting negative land use impacts.
- 3) Other. Good public relations and information/education programs were seen as critical in obtaining full local cooperation for the project and in limiting right-of-way acquisition problems. Fair compensation for disruption and damages was a corollary to recommendation voiced by respondents. In addition, policies to facilitate local employment on the project were recommended. Given the union nature of the project, such policies would be difficult to put into effect.

#### 4.2.3 Misconceptions About the Project

For the most part, survey respondents reflected a surprisingly accurate understanding of the Northern Tier Project and its likely implications for their communities. However, some misconceptions were apparent in the responses made to particular questions. In the event that construction of the proposed pipeline actually gets underway, it would be advisable for NTPC or DNRC to mount a public information effort directed at correcting the more important misconceptions - namely:

- 1) Significant Local Employment Opportunities. Given the skill and union requirements of the Northern Tier Project, it is unlikely that significant employment opportunities will exist for local<sup>1</sup> workers. Survey respondents were generally optimistic about possibilities for local employment.
- 2) Adequate Lodging. Respondents generally underestimate the transient lodging requirements of the NTP construction work force. Available data on transient lodging capacities (including RV/travel trailer hookups) suggest that construction camps would be required on the eastern sections of all corridor alternatives, except the interstate.
- 3) Property Tax Benefits. Respondents generally have only vague conceptions of the tax benefits that the project would bring to local taxing jurisdiction, particularly in the less developed counties. Moreover, some respondents believed that there would be no change or even that their taxes would increase as a result of the project.

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<sup>1</sup>Local workers are defined to be those who do not have to change their places of residence to work on the job.



#### 4.3 Cautions

The interpretation and application of PAAP survey results must take into account the limited objectives of the program, as well as the fact that the survey does not represent a probability sample. Moreover, the compressed time schedule prevents a full exploitation of all the information generated by the survey. At the county and community levels, sample sizes are small enough to render meaningless any comparisons between them. Finally, the survey sample is restricted to respondents located within the potentially impacted counties/communities and, therefore, does not include representatives of groups that, at the state level, may have shown an active interest in the proposed project.



## APPENDICES

APPENDIX B - Data Processing Documents

APPENDIX C - Data Processing Printouts

APPENDIX D - Survey Respondents

APPENDIX E - Miscellany

Available from the Energy Division  
Montana Department of Natural Resources  
and Conservation



APPENDIX A  
COUNTY AND COMMUNITY QUESTIONNAIRES



County: \_\_\_\_\_

Date: \_\_/\_\_/79

Interviewer: \_\_\_\_\_

## COUNTY SURVEY

I'm from Mountain West Research, and we are helping the State of Montana to evaluate the proposed Northern Tier pipeline that would carry oil from the State of Washington to Montana, North Dakota and the mid-west. There are several alternative routes being considered, one of which runs through your county. To help the State of Montana compare these alternatives, we wanted to talk to you about the impacts that you feel might be expected at the county level.

Constructing such a pipeline involves four steps. First, the right-of-way is cleared and then a trench is dug that is deep enough to bury the pipe at least three feet below the ground surface. The pipe is welded together and placed in the trench. The trench is filled, and the surface is usually graded to its original contours. Then the land can be used as before, except for the placement of structures (including trees) on the right-of-way. Many of the workers building the pipeline would stay in communities near the construction site for 2 to 4 months. Every 50 to 200 miles, pump stations are built to propel the oil. Several microwave control towers will be constructed along the pipeline route for communications and two facilities linking the pipeline to existing pipelines will be constructed in Montana.

1. Generally speaking, few people have experience with pipelines. Have you had any contact with or are you familiar with pipeline projects?

( CIRCLE ONE): 1. Yes      2. No      3. NA

- 1a. (IF YES): Has any of your experience been with the pipeline construction process?

2. Have you heard of the Northern Tier project?

( CIRCLE ONE): 1. Yes      2. No      3. NA



County Survey

Page 2

3. In general, what do you think happens to a county while a pipeline is being built through it? (PROBE)
  
4. More specifically, how do you think the presence of pipeline workers for a few months would affect your county? (PROBE)
  - 4a. Are these effects on your county \_\_\_\_\_ good, \_\_\_\_\_ bad, or \_\_\_\_\_ some of both? (CHECK ONE).
  
  - 4b. (IF ONLY NEGATIVE COMMENTS): Do you think there would be any benefits for your county?
  
  - 4c. (IF ONLY POSITIVE COMMENTS): Do you think any negative effects would occur in the county?
  
5. If pipeline workers were to locate in this county, where do you think they would stay?



County Survey

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- 5a. How many do you think could stay in this county with present facilities? (RECORD NUMBER, GIVE EXAMPLES NOT MENTIONED I.E. HOTELS/MOTELS, TRAILER COURTS, RV/CAMPER PARKS.)
- 5b. Have other temporary workers been housed here before?  
(CIRCLE ONE); 1. Yes 2. No 3. NA
6. (PROBE): Who, where, when and why?
7. If there were problems housing pipeline construction workers in this county, what do you think could be done about those problems?
8. Sometimes instead of staying in communities, these workers are housed in special construction camps some distance away. Do you think this would be better than trying to house them in communities like those in your county?
9. On the county level do you anticipate any problems with services and facilities? (CIRCLE ONE): 1. Yes 2. No 3. NA



County Survey

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9a. For instance, schools? (CIRCLE ONE): 1. Yes 2. No 3. NA  
(IF YES, DESCRIBE:)

9b. Medical Services: (CIRCLE ONE): 1. Yes 2. No 3. NA  
(IF YES, DESCRIBE:)

9c. Fire protection? (CIRCLE ONE): 1. Yes 2. No 3. NA  
(IF YES, DESCRIBE:)

9d. Law enforcement? (CIRCLE ONE): 1. Yes 2. No 3. NA  
(IF YES, DESCRIBE:)

9e. Or any others? (CIRCLE ONE): 1. Yes 2. No 3. NA  
(IF YES, DESCRIBE:)

10. What about the right-of-way over the buried pipeline; do you think that  
would cause any problems? (CIRCLE ONE): 1. Yes 2. No 3. NA  
(SPECIFY:)



10a. (IF PROBLEMS): What could be done to minimize those problems?

11. Are there any types of land or land use that you believe should be avoided by a pipeline right-of-way? (CIRCLE ONE): 1. Yes 2. No 3. NA

11a. (IF YES): Which types?

12. Over the long run, do you think your taxes would be affected by having a pipeline in the county? (CIRCLE ONE): 1. Yes 2. No 3. NA

12a. (IF YES): How do you think your taxes would change?

13. Do you think (PREDOMINANT LAND USE IN THE AREA) will be affected over the long run? (CIRCLE ONE): 1. Yes 2. No 3. NA

13a. (IF YES): In what way?

14. Would there be any (other) good long term effects: (SPECIFY)



15. Would there be any (other) bad long term effects? (SPECIFY)

16. All things considered, (CITE EXAMPLES OF POSITIVE AND NEGATIVE EFFECTS MENTIONED BY RESPONDENT) do you think building a pipeline through this county would be good, bad, or does not matter?

(CIRCLE ONE): 1. Good 2. Bad 3. Does Not Matter

16a. What aspects are most important in making you feel that way?

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17. (CIRCLE ONE): 1. Male 2. Female

Now, I would like to ask you a few questions for our statistical summaries.

18. What is the highest grade in school that you have completed? \_\_\_\_\_  
(IF 16 OR MORE, ASK WHAT DEGREE.)

19. What is your occupation?

20. How long have you lived in this county?



County Survey

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21. How old are you?

22. Are you active in any (other) organizations, committees, clubs, etc.?

(CIRCLE ONE): 1. Yes 2. No 3. NA

22a. (IF YES) Which ones?

23. Can you tell me who else in this county I should talk to?

24. Are there any people you know of who are interested or concerned about the possibility of a pipeline?

25. Is there anything else regarding possible county impacts that we have not discussed that you feel the State of Montana ought to consider in evaluating the effects of the proposed pipeline?



County: \_\_\_\_\_  
Community: \_\_\_\_\_

Date: \_\_/\_\_/79  
Interviewer: \_\_\_\_\_

## COMMUNITY SURVEY

I'm from Mountain West Research, and we are helping the State of Montana to evaluate the proposed Northern Tier pipeline that would carry oil from the State of Washington to Montana, North Dakota and the mid-west. There are several alternative routes being considered, one of which runs through your county. To help the State of Montana compare these alternatives, we wanted to talk to you about the impacts that you feel might be expected at the local level.

Constructing such a pipeline involves four steps. First, the right-of-way is cleared and then a trench is dug that is deep enough to bury the pipe at least three feet below the ground surface. The pipe is welded together and placed in the trench. The trench is filled, and the surface is usually graded to its original contours. Then the land can be used as before, except for the placement of structures (including trees) on the right-of-way. Many of the workers building the pipeline would stay in communities near the construction site for 2 to 4 months. Every 50 to 200 miles, pump stations are built to propel the oil. Several microwave control towers will be constructed along the pipeline route for communications and two facilities linking the pipeline to existing pipelines will be constructed in Montana.

1. Generally speaking, few people have experience with pipelines. Have you had any contact with or are you familiar with pipeline projects?

(CIRCLE ONE): 1. Yes 2. No 3. NA

- 1a. (IF YES): Has any of your experience been with the pipeline construction process?

2. Have you heard of the Northern Tier project?

(CIRCLE ONE): 1. Yes 2. No 3. NA



Community Survey

Page 2

3. In general, what do you think happens to a community while a pipeline is being built nearby? (PROBE)
4. More specifically, how do you think the presence of pipeline workers for a few months would affect your community? (PROBE)
- 4a. Are these effects on your community: \_\_\_\_ Good, \_\_\_\_ Bad or \_\_\_\_ some of both (CHECK ONE).
- 4b. (IF ONLY NEGATIVE COMMENTS): Do you think there would be any benefits for your community?
- 4c (IF ONLY POSITIVE COMMENTS): Do you think any negative effects would occur in the community?
5. Do you think that you personally would be affected? (Circle one)  
1. Yes 2. No (GO TO 6) 3. NA (GO TO 6)
- 5a. How would you be affected?
6. If pipeline workers were to locate in this community, where do you think they would stay?



6a. How many do you think could stay in this community with present facilities? \_\_\_\_\_ (RECORD NUMBER. GIVE EXAMPLES NOT MENTIONED I.E. HOTELS/MOTELS, TRAILER COURTS/RV/CAMPER PARKS).

6b. Have other temporary workers been housed here before?  
(CIRCLE ONE): 1. Yes 2. No 3. NA

6c. (PROBE): Who, how many, when:

7. Workers sometimes rent rooms in private homes. Do you think such rooms might be available during the pipeline project?  
(CIRCLE ONE): 1. Yes 2. No 3. NA

7a. (IF YES): About how many? (GIVE NUMERICAL EXAMPLES, IF NECESSARY).

8. If there were problems housing pipeline construction workers in this community, what do you think could be done about those problems?

9. Sometimes instead of staying in communities, these workers are housed in special construction camps some distance away. Do you think this would be better than trying to house them in communities like yours?  
(CIRCLE ONE): 1. Yes 2. No 3. NA



10. I'd like to ask about a few facilities and services that are used by temporary construction work forces. How do you think water and sewage in this community would be affected by having pipeline workers stay here?

10a. (IF PROBLEM MENTIONED): What do you think could be done to reduce that problem?

11. Sometimes a few of these workers bring their children with them. About how many extra students do you think your school system could handle in grades K-12? (CHECK ONE):

- ☐ less than 10
- ☐ 10 to 20
- ☐ 20 to 30
- ☐ 30 to 40
- ☐ 40 to 50
- ☐ NA

11a. (IF PROBLEMATIC): What could be done to reduce this problem?

12. On another issue, would you expect any law enforcement problems?

(CIRCLE ONE): 1. Yes 2. No 3. NA

12a. (IF YES): What problems?



12b. What could be done to ease these problems?

13. Regarding health care, do you think present medical staff and facilities are adequate to treat the temporary work force that might reside here?  
(CIRCLE ONE): 1. Yes 2. No 3. NA

13a. (IF NO): What could be done to address the problem?

14. Do you think commercial facilities - retail outlets, food and drink establishments - here would be adequate to serve workers temporarily resident in this area? (CIRCLE ONE): 1. Yes 2. No 3. NA

14a. (IF NO): Where do you think those workers would trade?

15. What about the right-of-way over the buried pipeline, do you think that would cause any problems? (CIRCLE ONE): 1. Yes (SPECIFY). 2. No 3. NA

15a. (IF PROBLEMS): What could be done to minimize those problems?

16. Are there any types of land or land use that you believe should be avoided by a pipeline right-of-way? (CIRCLE ONE): 1. Yes 2. No 3. NA

16a. (IF YES): Which type?



Community Survey

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17. Would you expect many local people to find work on the pipeline?

(CIRCLE ONE): 1. Yes 2. No 3. NA

17a. Would that be good or bad?

(CIRCLE ONE): 1. Good 2. Bad 3. NA

17b. Why?

18. Assuming that some work might be available, how many local people do you think would apply? (CIRCLE ONE):

0-5	11-15	21-25
6-10	16-20	26 and over

18a. Do you think people will change jobs to work on the pipeline?

(CIRCLE ONE): 1. Yes 2. No 3. NA

19. (IF YES ON 18, THEN ASK): What if, as on other similar pipeline projects, only a few local people were hired for work on pipeline construction, would that be good or bad? (CIRCLE ONE): 1. Good 2. Bad 3. NA

20. Do you think other jobs would be created because of pipeline construction activities or the presence of the pipeline workers?

(CIRCLE ONE): 1. Yes 2. No (GO TO 21) 3. NA

20a. What sort of jobs would those be?

(IF ONLY DIRECTLY RELATED JOBS MENTIONED, ASK): Would there be jobs other than those directly related to the pipeline?



Community Survey

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20b. Do you think local people would fill those jobs?

(CIRCLE ONE): 1. Yes 2. No (GO TO 21) 3. NA

20c. (IF NO): Why not?

21. Over the long run, do you think your taxes would be affected by having a pipeline in the area? (CIRCLE ONE) 1. Yes 2. No (GO TO 22) 3. NA

21a. (IF YES): How do you think your taxes would change?

22. Do you think (PREDOMINANT LAND USE IN THE AREA) will be affected over the long run? (CIRCLE ONE): 1. Yes 2. No (GO TO 23) 3. NA

22a. (IF YES): In what way?

23. Would there be any (other) good long term effects? (SPECIFY)

24. Would there be any (other) bad long term effects? (SPECIFY)



25. All things considered, (CITE EXAMPLES OF POSITIVE AND NEGATIVE EFFECTS MENTIONED BY RESPONDENT) do you think building a pipeline through this area/county would be \_\_\_\_\_good, \_\_\_\_\_bad, or \_\_\_\_\_does not matter (CHECK ONE)?

25a. What aspects are most important in making you feel that way?

---

26. (CIRCLE ONE): 1. Male 2. Female

Now, I would like to ask you a few questions for our statistical summaries.

27. What is the highest grade in school that you have completed? \_\_\_\_\_  
(IF 16 OR MORE, ASK WHAT DEGREE.)

28. Do you have any special vocational training or trade skills?  
(CIRCLE ONE): 1. Yes 2. No 3. NA

28a. (IF YES): What?

29. What is your occupation?

30. How old are you?

31. Do you have any children living at home?  
(CIRCLE ONE): 1. Yes 2. No 3. NA



31a. (IF YES): What are their ages and are they boys or girls?

AGE: \_\_\_\_\_

SEX: \_\_\_\_\_

32. Are you active in any organizations, committees, clubs, etc?

( CIRCLE ONE): 1. Yes      2. No      3. NA

32a. (IF YES): Which ones?

33. How long have you lived in this community/local area?

34. Do you have any plans to move? (CIRCLE ONE): 1. Yes      2. No      3. NA

35. Can you tell me who else in this community I should talk to?

36. Are there any people you know of who are interested or concerned about the possibility of a pipeline?



37. Is there anything else regarding possible community impacts that we have not discussed that you feel the State of Montana ought to consider in evaluating the effects of the proposed pipeline?





